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Addresses.

SURGICAL TREATMENT OF NEPHRITIS.

(BRIGHT'S DISEASE.)*

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CHICAGO.

As early as 1889 I explored the right kidney of a young man, 24 years of age, who presented symptoms of stone. There were pain and tenderness in the region of the kidney, and attacks of renal colic with hematuria at irregular intervals. No calculus was discovered by the exploration, but he was relieved of his colics and hemorrhages for some time. Four years later he died of Bright's disease.

For the next seven years my experience with the fixation of floating kidneys impressed me with two facts: First, that a symptomatic cure was obtained when the organ was suspended by its rolled-off capsule, the nephralgia passing away and the urine becoming normal in quantity and quality; and second, that in cases diagnosed as nephralgia and floating kidney, when this was not done, but a simple nephropexy performed instead, many of the cases were not benefited by the operation. I recollect in 1890 operating on one of these a second time, on account of pain in the region of the kidney, where a stone was suspected. In my exploration the capsule was peeled off and the kidney opened and punctured. This effected a cure, and she is alive and well, Nov. 22, 1903 (by letter).

A more careful study of the cases of tender and floating kidneys revealed phenomena which gave us an increased interest from a clinical standpoint. The difference in the character of the pain, from sensations of a dragging weight or constant dull ache when on the feet, often eased when lying down, to severe paroxysms like renal colic; or, again, to exacerbations of pain of a neuralgic nature, sometimes extending to the nerves on the affected side, was suggestive of the existence of different conditions in the kidneys that had left their normal positions. The nausea, vomiting, anorexia, diarrhea, constipation, flatulence, debility, frequent urinary disturbances, emaciation and depression of spirits or mental confusion, often found in these cases, are no doubt expressions of mild uremia in nephritis, and not due, as we formerly supposed, to floating kidney *per se*.

It has been many times disputed that movable kidney produces any effect on the character of the urine. When a person with a floating kidney seeks advice, with often a history of scanty urine, high-colored, a sedimentary deposit, or at other times it is more copious than normal, and blood, hyaline and granular casts and albumin are found in it, there is a nephritis present as well, and whether the inflammation or the floating kidney existed first is often doubtful.

The graver condition now is the nephritis, and decapsulation and nephropexy are indicated. That a nephritis was present in the vast majority of my cases, I have verified by a microscopic examination of a portion of kidney tissue removed at the time of the operation. In three instances of floating and tender kidney met with since January, 1899, no changes were present in the kidney tissue. The pain and tenderness in them must have been caused by something else—congestion, nephralgia, twisting of the ureter, etc. This is positive proof that they are not all cases of nephritis, as I formerly supposed.

The only accurate means of diagnosing the condition of a kidney that is floating and tender, with no changes in the urine, is by a microscopic examination of a portion of the kidney. It is not infrequent to find interstitial nephritis (microscopically) when no albumin or casts are in the urine prior to the operation, which are instances of "nephritis without albuminuria." On the other hand, chronic Bright's disease may be present in floating kidneys, where pain was not a symptom nor tenderness a sign, but in what percentage I do not know. In my experience, I have refused to perform nephropexy, because Bright's disease was present as well as the floating kidney.

Do not these facts teach us that all floating kidneys should be suspended by their own stripped-off capsule, whether they are painful and tender or not, for by so doing we surely prevent the organ from again wandering; and, what is still more important, the progress of a destructive disease in a large percentage of cases may be cut short. I have yet to see a case in which decapsulation and suspension of a normal kidney did harm.

During 1897 and 1898 I frequently expressed the opinion at my clinics that a certain form of Bright's disease (interstitial nephritis) was always connected with a tender floating kidney, and was symptomatically cured by stripping off the capsule and suspending the kidney; but we now know this is not always the case. While formerly my object in the treatment of these cases was to put the kidney at rest, now, however, on account of the frequency with which inflammation occurs at the same time, the treatment of the latter becomes the more important.

On June 17, 1896, at the Chicago Post-Graduate Hospital, I performed decapsulation for nephritis and

* The President's Address, delivered before the Western Surgical and Gynecological Association, at the Thirteenth Annual Meeting, held at Denver, Colo., Dec. 28 and 29, 1903.

floating kidney in a young girl, with excellent immediate results. I was assisted by Drs. W. A. Tichenor and E. M. Brown.[1] My first double decapsulation for nephritis and floating kidney was performed also at the Post-Graduate Hospital, on Dec. 9, 1897, assisted by Drs. E. M. Brown and W. A. Tichenor, and in the presence of a large class of doctors from different states.[2] The immediate result was amazingly good. It is now over six years since I operated on this woman. She is in better general health than she has been for the last eighteen years. I have had her urine examined four times the last month, with the same report each time, as follows: In twenty-four hours, 60 ounces. No albumin; no sugar; no casts; no blood; urea 1½ per cent.

This case is important for many reasons. Chief among them are:

1. That her right floating kidney was fastened a year previously by stitching it in place by a good gynecologist, without splitting or peeling off the capsule, but thereby she was not relieved.

2. Decapsulation relieved this same kidney of pain and tenderness.

3. The double decapsulation so far has cured her interstitial nephritis.

4. Six years last September 9 seems a fair time test.

On Dec. 16, 1898, in a discussion at the Chicago Gynecological Society on "Movable Kidney," I advanced the following ideas:[3]

"On the kidney being exposed, its condition is to be considered. If there be a firm adherent capsule to the kidney, it had better be stripped off, as, for instance, in interstitial nephritis. The stripping off of such a capsule improves the condition of the kidney, in that it liberates its cortical portion, and we observed the improvement in the urine afterward.

"I do not wish to be misunderstood with reference to removing the normal capsule of a kidney. I condemn this, and I do not do it. But the peeling off of a thick, pathologic capsule is a thing that is desirable. I have gone into the subject at considerable length in my surgical work, and the distinguished Professor Klebs agrees with me that where we have a thickened, fibrous, pathologic capsule, pressing on and destroying the kidney, it is a good sound surgical practice to peel off the capsule."

This was before I had removed portions of kidney for microscopic examination, but the opportunity to do this soon arose. Before the Chicago Academy of Medicine, Feb. 10, 1899, I mentioned my early work, and reported two cases of interstitial nephritis and floating kidneys, giving a microscopic report of sections. My paper appeared in THE JOURNAL March 18, 1899.

These two cases were operated on January 4 and 14, 1899, respectively, and are still, from a recent report, in good health.

In about a month later, Dr. G. M. Edebohls published his first article, entitled "Chronic Nephritis Affecting a Movable Kidney, as an Indication for Nephropexy."[4]

In my work I am pleased to report progress in all the cases reported at New Orleans last May. Between four and five years ago only two surgeons, Dr. Edebohls and myself, were decapsulating kidneys for Bright's disease. Since then no less than about forty surgeons have reported cases.

These have been collected by Dr. Ramon Guiteras of New York, and number 120 cases in all. I wish to add three important cases to this list.

CASE 1.—*Renal Decapsulation and Puncture for Acute Diffuse Nephritis. Death.*—June 12, 1903, Dr. Ira H. Rea called me to see a case with him and Dr. W. H. Waugh, at Wheaton, Ill. The patient, a man 56 years of age, had been ill with acute nephritis for twenty days. He was a merchant, visited Wisconsin on business, and there caught cold while driving through the country. When Dr. Rea saw him on his return, his urine was scant, 30 ounces in twenty-four hours, and very bloody, but contained no casts. He then complained of pain in the region of both kidneys, and felt very ill. He was a man of excellent habits, and never before gave any evidence of nephritis. The doctor had been treating him for stomach disturbances off and on for several months. During this period he had an analysis made of the urine several times by Dr. W. A. Evans of the Columbus Medical Laboratory, and at no time did it contain the slightest evidence of kidney disturbance or disease. A few months previously he passed for life insurance. Dr. Rea also had made examinations of his urine repeatedly, with negative results.

When I saw him, on the twentieth day of his illness, he was *in extremis*. A general puffiness of the face and extremities, a rapid respiration (thirty-six per minute), and an uncontrolable drowsiness, with persistent vomiting, presented an unmistakable picture of his condition. He had only passed 8 ounces of urine in six days, which contained blood; urea, 1 per cent. per vol., but no casts. He had been kept profusely perspiring for days, and this accounted in part for the scant urine. It appeared that he responded to treatment very well the first few days, and even got out of bed. A relapse of his symptoms stubbornly resisted all medication and attention.

Decapsulation of his kidneys was discussed. It was clear that he was about to pass away before long, and everything else had been already done. With the distinct understanding that possibly an operation might relieve him, I undertook the procedure on the right kidney there and then, assisted by Drs. Rea, Waugh and Norman H. Ferguson. Local anesthesia (cocain) was used until the kidney was exposed. The traction on the forceps grasping the fat gave him pain, so a little chloroform was administered to the point of analgesia, and the kidney decapsulated, punctured, and a V-shaped piece removed. The bleeding from where the section was removed was so profuse that a couple of mattress sutures of catgut had to be passed to control it. The kidney was about normal in size, nodular on its surface, and of a dark blue color. It felt tense, and its capsule was blistered and separated here and there from the cortex by bloody serum. On splitting it, bloody serum escaped, and no difficulty was experienced in peeling out the kidney with my finger. The capsule easily tore, and it was nearly all removed. With the capsule removed, the kidney was dark red in color, and firm and friable in consistency.

In my judgment, here was a condition in which many punctures were indicated. My objects in puncturing a diseased kidney in many places are: (1) To relieve tension; and (2) to open many glomeruli, urinary tubes and blood capillaries. From these openings blood, serum and urine come from the kidneys at once into the dressings.

To come back to this case, I drained the wound with a rubber tube and plain gauze. He died in fifteen hours after the operation from edema of the lungs, for his lungs filled up, and he never regained consciousness. In my opinion, he died sooner than he probably would have if left alone. No urine entered the bladder after the operation, but the dressings had to be changed several times, and they were soaked with a bloody fluid, having the odor of urine.

Pathologic Report.—A study of many sections of the portion of kidney tissue showed an acute diffuse inflammation engrafted on a chronic interstitial nephritis. The malpighian

1. Journal of the American Medical Association, July 4, 1903.
2. Case 2, Jour. Am. Med. Assn., July 4, 1903.
3. The American Gynecological and Obstetrical Journal, Feb., 1899.
4. Medical News, New York, April 22, 1899.

bodies suffered severely, their epithelium being degenerated and necrotic here and there. The streaks of red running through the specimen were linear hemorrhages. The small, mottled, grayish-red spots were the epithelial cells of the convoluted tubes and malpighian bodies greatly proliferated, degenerated and necrosed. The capillaries of the tufts were filled with cells and thrombi, with leucocytes and red blood corpuscles within Bowman's capsule. There was cloudy swelling; fatty and hyaline degeneration of the tubular epithelium. Along with these parenchymatous changes, the interstitial ones were fully as marked. Small-celled infiltration occurred about the capsules and between the tubes, and active proliferation of the connective tissue. Chronic changes were manifested by an increase of the connective tissue surrounding the malpighian bodies and convoluted tubes, as well as hyperplasia of the walls of the blood vessels and thickening of Bowman's capsule. Bloody, hyaline and granular casts were pent up in several places within the tubules.

IMPORTANT FEATURES OF THIS CASE.

1. Chronic interstitial nephritis, with every evidence of granular kidney without any previous symptoms or signs. If a microscopic examination of a portion of the kidney had not been made, the case would have gone down in history as one of acute nephritis.

2. The severity of the acute diffuse nephritis without other apparent cause than exposure to cold is remarkable. It was so severe that it might be called "hemorrhagic nephritis," which, however, is more characteristic of intense septic and infectious cases.

3. Operation was of no avail, because it was too late in being performed. This case supported the view that acute nephritis is considerably within the scope of the surgeon's work. We are convinced that if double decapsulation and puncture had been performed within a week of his illness, he would at least be alive to-day. I am of the opinion that in acute inflammations of the kidneys the consultant should be the surgeon. In this man the surgical treatment of his kidneys should have been the same as of a phlegmonous inflammation of his hand, in which free incisions would have been promptly made to relieve tension, and to liberate imprisoned poisonous materials. It is through a study of surgical pathology, especially where the elements of the disease are caught red-handed, on the operating table, that true conservative surgery can be unassailably established.

CASE 2.—*Interstitial Nephritis, Chronic, Double Decapsulation. Recovery.*—(Surgical clinic at the College of Physicians and Surgeons, Chicago, Nov. 20, 1903.) I operated on this man, who has just walked in to report himself, four weeks ago for chronic, interstitial nephritis, and, as you will remember, his two kidneys were decapsulated at the one sitting. The surgical treatment of nephritis is not mentioned in your text-books. I am, therefore, constrained to give a brief review of this case, and also of the one I operated on a week ago. He is 45 years of age, strongly built, of better habits than formerly, and a Chicago politician by occupation. He was employed as a street-car conductor sixteen years ago, but had to give it up on account of pain in his back.

Condition on Admission (Nov. 16, 1903).—The face, hands and feet were swollen and edematous. Under the lower eyelid pitting on pressure was not as marked as on his feet and ankles, and still less on his hands. The conjunctivæ were chronically congested (red), and his eyesight was so poor that he could not recognize his friends very well. He had the appearance of one who had been drinking heavily for a long time, although he had not imbibed. The fundus of both eyes revealed great capillary congestion, but no hemorrhages. His arteries were apparently sclerotic, and left ventricle of the heart hypertrophied. There were no valvular lesions, but the second sound (aortic) was unduly accentuated. His most prominent complaints were:

1. Headache. This symptom began eight months ago, lasting at first from a few hours to two or three days; migraine in character. With the lapse of time the headache became more and more severe and persistent until finally it was constant.

2. Dizziness. For several years dizzy spells would come over him occasionally, but since the onset of the severe headache this symptom became more frequent and troublesome.

3. Vomiting, nausea, retching and sometimes diarrhea were gastrointestinal disturbances which accompanied the severest attacks of headache.

4. Frequent urination. During the daytime he urinated about every hour; could not often go two hours with comfort, and at night he urinated four or five times. Lately he has had tenesmus at the neck of the bladder after micturition (septic deep urethra).

5. Loss of strength. His strength began to fail three years ago, and since then he has lost about twenty pounds. Since the headache has become so marked, he has not been able to earn a living with his head or hands.

6. Nervousness. Feeling miserable, sometimes drowsy and again wakeful. Between the attacks of headache, he felt a soreness through his brain, which prevented him from inclinations to thinking or talking. There has been some pain and tenderness in the region of his kidneys for several years, but lately this symptom was overshadowed by those already mentioned.

7. Coma once. One week before he entered the hospital he became unconscious and remained in that condition for three or four hours. The coma followed one of his severe headaches. No convulsions occurred. He was in the hospital one week before I operated, which made it sixteen days after the occurrence of the coma. While the symptoms of this disease are varied and often insidious, making a diagnosis sometimes difficult, the few symptoms and signs I have already mentioned, even without telling about his urine, point to but one condition—interstitial nephritis.

Urine Before Operation.—Quantity, 72 ounces in twenty-four hours. Pale amber color; sp. gr., 1007; urea ⅝ of 1 per cent.; albumin, 36 per cent.; pus cells; epithelium; casts, both hyaline and granular.

Operation (Nov. 23, 1903).—Chloroform was administered. A skin incision was made parallel to and half an inch below the twelfth rib on each side. The kidneys were then reached by splitting the muscles and dragging out the fat with forceps, which brought the kidney into view. The capsule was split over the cortex and peeled off. The right kidney was smaller and firmer than normal; the perinephritic fat was more vascular and fibrous than normal and firmly adhered to the kidney, and the capsule was thickened and firmly adherent to the cortex of the kidney. In stripping it off, small portions of kidney broke off with it in several places. While no effort was made to save the capsule from injury, still the major portion of it was left as a collar around the root of the kidney. The surface of the kidney was darkish-red in color, which bled rather freely, and also from multiple punctures. A V-shaped section was removed for microscopic study; from this wound arterial blood spurted from a small arteriole. A mattress suture of fine catgut controlled it. The fat was now displaced below the organ, the wound closed, and drainage of gauze and tube inserted to the surface of the kidney.

The left kidney was not so pathologic in appearance, its surrounding fat and capsule not so thick and fibrous. On peeling off the capsule no bleeding occurred similar to that on the other side. A section of kidney tissue was removed.

Urine After the Operation.—For three days blood was present in the urine. The quantity passed in twenty-four hours varied from fifty-six to sixty-six ounces. The urine of the fourth day had a specific gravity of 1010; 20 per cent. albumin; urea, 1 per cent., and it also contained hyaline and granular casts; pus, which was from deep urethra. Several examinations of it since then have shown no material change, and I expect to find albumin and casts for several weeks. In

some cases the improvement in the urine is most remarkable, the albumin and casts disappearing between three and six weeks.

Microscopic Report of Renal Tissue Marked R. and L. (from the P. and S. Laboratory).—One (R.) was from the right kidney and the other (L.) from the left. The changes in both were characteristic of chronic interstitial inflammation. There was increase of fibrous tissue throughout the sections, forming concentric layers about the tubules and Bowman's capsule, with some round-cell infiltration. In the selection from the right kidney there was complete atrophy of some of the glomeruli, represented by densely encapsulated hyaline masses. In no instance were the tufts and capsule normal, there being thickening and increase in the number of cells. The convoluted tubes showed hyaline, granular and fatty changes. Epithelial débris and tube-casts. Where the connective tissue was most abundant, the tubules were atrophied, and represented by cubical cells. A few of them were dilated.

Result.—The immediate result in this case is simply marvelous. The clinical picture is completely changed. Before the operation he was suffering with uremia, which was manifested by the headache, dizziness, vomiting and nervous disturbances; even a coma on one occasion. All his symptoms vanished within a week. His mind cleared up; sight completely restored and appetite returned. No headache, restless nights, vomiting nor pain in the back now. The appearance of the man has changed completely. The swelling and edema of his face, hands and lower extremities have disappeared. He looks happy, and says that he never felt better in his life.

CASE 3.—Same clinic. *Chronic Parenchymatous Nephritis. Double Decapsulation. Death.*—The case I operated on a week ago died on the third day from pulmonary edema. You will recollect that I gave a bad prognosis just as soon as I saw his kidneys. He was a young man, 18 years of age; had scarlet fever twelve years ago, but his nephritis was not discovered until nine months ago.

Condition on Admission (Nov. 13, 1903).—There was general edema all over the body. Face puffy, cellular tissue around the eyes filled with serum; scrotum slightly edematous; vision very bad, could not count fingers nor distinguish his mother from the nurse. He complained of "spots before his eyes" (fundus not examined), headache, indigestion, nausea, vomiting, frequent urination and a small quantity each time, backache and tenderness over the kidneys. Slight difficulty in breathing and occasional spasms of his muscles of the right arm. He was evidently verging on uremic convulsions.

Urine Before Operation.—In twenty-four hours twenty to thirty-six ounces. Quantity decreasing. Specific gravity, 1010. Pale, bad odor, acid; albumin, 35 per cent.; urea, 1 per cent.; hyaline and granular casts.

Operation (Nov. 13, 1903).—Chloroform throughout. Double decapsulation at one sitting, double nephrotomy and drainage. The first stroke of the knife through the skin and fat was followed by rapid oozing of clear serum. During the entire operation it kept one assistant busy mopping it up. The fat around the kidneys was water-logged, the capsules thin and insignificant, the organs themselves very small, pale and bloodless. Each kidney was about one-third the size of a normal one. On passing the knife into the pelvis of each no bleeding whatever occurred, which was a bad sign. In this case I forgot to remove a section of the kidney tissue until it was too late. It was so clearly a case of "small white kidney," parenchymatous nephritis in its clinical history, symptoms, signs and microscopic findings in the urine, that I feel satisfied with our diagnosis. He stood the operation well.

Urine After Operation.—First twenty-four hours eighteen ounces voided by bladder and dressings were soaked several times. Second twenty-four hours twelve ounces voided by bladder and dressings soaked three or four times. Bowels began to move rapidly and urine was not collected on third day, but the kidneys were secreting all the time.

Result.—Death at the end of three days from edema of the lungs. This young man had received from internists all the skill and medication that this city can afford. It was of no avail. Inasmuch as the exact condition of the kidneys could not be accurately known by the findings in the urine or symptoms and signs, I decided to offer him the only chance left for a respite from his nephritis. Considering that his kidneys were so extremely small ("small white") and in an advanced pathologic state, it is a surprise that the chloroform and operation did not put them completely out of commission. His kidneys secreted urine to the last.

INDICATIONS FOR SURGICAL TREATMENT.

1. *Floating Kidney.*—Floating kidney may now be put down as one of the indications for decapsulation. An observation, no doubt a common one, is that a floating kidney is often accidentally discovered in one's own person, or is found by a physician, at a time when no disturbing symptoms are present from it. It is made light of and often forgotten until some day it gets painful and tender, the urine becomes irregular in flow, sometimes scant and again profuse albumin appears in it; urea decreases; cylindroids are observed and the general health is being undermined. In a nervous person the pain might be suggestive in origin, but the urinary changes never. During the last six years I have held the view that a floating kidney should not be operated on simply because it was dislocated. I therefore refused to operate on other than those giving disturbance. I have learned that several of those whom I advised to have no surgical interference came under the knife of some other surgeon. I made inquiries of thirteen widely-scattered cases, and all but three had undergone an operation because of the painful and annoying symptoms instituted by the floating kidneys.

On the other hand, a freely movable kidney may be diseased without causing pain and tenderness, or even constant urinary changes. This experience and knowledge have convinced me that all cases of floating kidneys should be treated by decapsulation and fixation. I firmly maintain also that the surgeon's work is not complete without a microscopic examination of a piece from the kidney. It is surprising how often you find the unexpected—chronic nephritis.

2. *Nephritis and Floating Kidney.*—It has been maintained that cases of floating kidney with the symptoms and signs so characteristic of nephritis are not cases of nephritis at all, but that the condition is temporary, the symptoms disappearing in due time after nephropexy. The only way to refute such a statement is to exhibit under the microscope sections of the kidney of the cases in question. The immediate result in this class of cases has been so amazingly prompt, and the remote results so permanent, that some surgeons doubt these to have been cases of nephritis.

It is a matter of common clinical experience to find that nephritis does not always find expression in the urine, and the data from it are often unreliable in forming an idea of the severity of the disease. Inasmuch as I could not produce better cases than the first two cases from which kidney tissue was removed to impress the importance of the microscopic examination, I am constrained to reproduce the reports, which are as follows:

Pathologic Examination.—(Klebs' Pathological Laboratory.) The section of kidney from the case of Mrs. M., sent to the laboratory Jan. 4, 1899, presents the following changes: The connective tissue growth is not extensive, the lining epithelium of the tubes is more implicated, as in chronic parenchymatous nephritis. The lining epithelium of the convoluted tubules shows cloudy swelling, and there is some small cell infiltration in some parts of the kidney, indicating that the inflammatory process is still existing. The epithelia of the glomeruli are nearly lost, some of the glomeruli consisting only of a homo-

geneous mass. Capsules of Bowman thickened; tubules with atrophic epithelium present, dilated tubules, desquamated epithelium in some of them, hyperplastic connective tissue around others. Pathologic diagnosis: Interstitial nephritis with cloudy swelling.

Figure 1.

Figure 2.

Figure 3.

The above pathology is represented by microphotographs Nos. 1, 2, 3 (Zeit). The second case from which kidney tissue was removed and studied Zeit furnished the following report:

The section of kidney from the case of Mrs. W., examined Jan. 14, 1899, shows the picture of an interstitial nephritis with much proliferation and hyperplasia of connective tissue, areas of which consist entirely of this connective tissue growth, with obliterated or waxy glomeruli. Between these portions

Figure 4.

Figure 5.

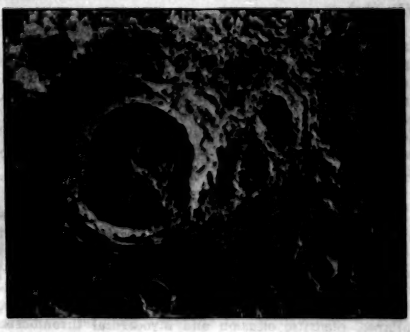

Figure 6.

are found islands of partially changed kidney tissue, in which there are atrophic tubules and tubules with a desquamated epithelium, flattened epithelial lining in tubules of diminished caliber, and some cloudy swelling in the lining of the epithel-

ial cells. In some of the tubules hyaline casts are found. The capsules of glomeruli are thickened, and their connective tissue with many nuclei is arranged in concentric layers.

These changes are represented by microphotographs Nos. 4, 5 and 6 (Zeit). These microphotographs speak for themselves and are produced for the first time, to put at rest whatever misgivings may have been expressed regarding the pathologic findings in those cases.

In reply to the statement that the cures were so rapid that they could not have been true cases of nephritis, it is, I must say, almost incredible that the clinical picture of one in suffering and distress can, within a few days, by a simple operation, be transformed to represent ease and happiness, but it is just as true as it is that most of the tender floating kidneys are true cases of nephritis, as demonstrated microscopically. It is equally hard to believe that within a few weeks or months the symptoms and signs of the nephritis clear up. We must remember that the kidneys have an abundant vascular supply, excretory tubes and glomeruli, more than enough to carry on their ordinary functions, and a recuperative and regenerative power that is most wonderful. With the knowledge that we possess of the rapid subsidence of acute, subacute and chronic inflammations of other organs, and parts of the body, when properly treated, we should no longer doubt the rapid cure of kidney inflammation when given the best opportunity to flush itself of poisonous materials through its natural system of drainage, and also allow blood serum and urine to drain through punctures made in it. Nature repairs the traumatism made in reaching the kidney wonderfully rapidly, and why not as speedily restore the kidney to assume its function and cease supplying albumin, casts, etc., to the urine? In tender and floating kidneys the fact that a small portion of the organ is removed, and that we find it diseased, is no proof that the whole kidney is in the same pathologic condition. In sections from floating kidneys there are sometimes only slight changes, while again all the characteristic destructive changes of advanced nephritis are present. It is my firm belief that a floating kidney is a frequent cause of chronic nephritis, by constantly interfering with its vascular supply, nutrition and free excretion of urine.

3. *Nephritis.*—*a.* Acute Bright's disease. *b.* Chronic interstitial (Bright). *c.* Chronic parenchymatous (Bright).

Mr. Reginald Harrison boldly and successfully attacked acute diffuse nephritis under a mistaken diagnosis, but nevertheless originated the splitting of the capsule to relieve kidney tension, and has written fully concerning his cases. Whether acute Bright's disease be due to exposure to cold and wet, accompanies or follows specific fevers, or is caused by toxic agents or pregnancy, it would seem rational not to allow the patient to speedily die without following the example of Harrison.

GENERAL REMARKS.

In looking over the literature I find that the causes of death after the operation in 123 cases, by different surgeons, were as follows: Four died of pulmonary edema, 6 of uremia, 4 of coma, 3 of sudden heart failure, 3 of exhaustion, and one each of endocarditis, suppression of urine (ether being given), anuria, general dropsy, collapse, pleuritic effusion and myocardial thrombosis. There were 27 deaths out of 123 cases, within a year after the operation. A closer analysis shows that of these 27 deaths, 6 died within eighteen hours after the operation, 9 between one and nineteen days, 2 between two and seven weeks, 3 between two and three months, and 1 lived a year. The vast majority of these deaths must not be attributed to the operation. Even allowing all deaths within a week to be due to the operation, there would be a mortality of only about 9 per cent. When the limitations of the operation are more clearly defined, and many of the extreme cases left alone, the mortality should not be more than 5 per cent. in the hands of experienced surgeons. It is fair to conclude that the earlier an operation is performed in these cases the less will be the fatality, and the greater the benefits.

Original Articles.

THE CORRECTION OF RETRODISPLACEMENTS OF THE UTERUS.*

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It is unnecessary to occupy your valuable time by going extensively into theories advanced as to the etiology of retrodisplacements of the uterus, or discuss the almost endless train of subjective symptoms that have been attributed to this condition. Nor shall I attempt to trace the evolution of the treatment from the time of Hodge down through the operative measures that have been devised during the last decade. This is history with which you are all familiar.

The uterus, bladder and rectum have their physiologic range of motion, and must remain susceptible of motion to perform their functions normally. This being true, there can be no fixed axis of the uterus while it retains its normal relation to the other pelvic organs. Simultaneously with retrodeviation beyond the normal limit of motion, there is a descent of the organ toward the pelvic outlet, with a change of its relation to surrounding viscera, as well as corresponding changes in its blood supply and drainage of its secretions. With pre-existing or subsequent pelvic inflammation, the uterus and adnexa become fixed in mal position.

It is perhaps the most generally accepted opinion that labor and abortion are the chief etiological factors in the production of retrodisplacements. While we know that damage to the integrity of the pelvic floor with an infected and heavy uterus frequently acts as a cause, we know equally well that it does not always do so. We encounter at the examining table cases of extensive lacerations with heavy, subinvoluted uteri, in which the axis of the organ is normal. On the other hand, we find cases of extreme retrodeviation in young girls and unmarried women in whom the uterus may be almost infantile in type, perhaps fixed by adhesions. A study of the clinical history of many of these cases will show tubal and pelvic inflammation to have existed. Congenital retrodisplacement is extremely rare.

The consensus of opinion of those who have had the richest experience seems to be that simple, uncomplicated retrodisplacements rarely give rise to disturbing symptoms, and when they coexist they are caused, in large part at least, by other pathologic conditions. No treatment, therefore, should be suggested until a careful examination reveals the relation between the possible causes of the symptoms and the retrodisplacement. To this end, general anesthesia for examination may be necessary. Nothing should be overlooked or taken for granted. We should not be content when we

* Read at the Thirteenth Annual Meeting of the Western Surgical and Gynecological Association, held at Denver, Dec. 28-29, 1903.

find distended and adherent tubes or a prolapsed and tender ovary, but should explore the rectum for hemorrhoids or fissure, which, as we all know, may give rise to symptoms closely simulating those derived from pathologic conditions within the pelvis.

In the few uncomplicated cases, implying a uterus movable and free from inflammation, but which gives rise to discomfort either psychic or real, the use of a well-fitting pessary in connection, if necessary, with pelvic massage and postural treatment, may be all that is required.

With the advances made by modern, aggressive surgery, the use of the pessary was all but abandoned; there seems to be of late, however, a wave of sentiment back toward its more frequent employment, which possibly will increase as we learn to differentiate our cases more carefully. After the selection of the proper case for its use, the most serious objection to it is the time required to accomplish a permanent result. Its use implies a patient having the leisure and means which will enable her to be "tied to a doctor's office" for months or years. The same condition occurring in a woman who is obliged to work, standing on her feet many hours each day, demands something different, as she can not afford the protracted treatment of her (perhaps) more fortunate sister. In her case measures must be employed which will restore to her in the least possible time the ability to work comfortably. This, of course, means an operation. Many operations have been devised, the great number being the strongest evidence of their shortcomings. The chief source of failure and disappointment that has attended these operations has probably come from the belief that it was the position of the uterus *per se* that gave rise to symptoms demanding treatment, instead of the coincident pelvic lesions that accompany it. Dysmenorrhea is not an infrequent accompaniment, but is rarely caused by it, and is, therefore, almost never relieved by the correction of the displacement, either by mechanical treatment or operation. When this is the chief symptom complained of, it is wise to be guarded in promising relief.

The organ has been attacked from above and from below; its natural ligaments shortened and new ones made with the central idea of correcting its abnormal axis. With the clearer understanding of pelvic pathology in connection with these cases, I think we may safely look for better results in the cases we operate on, and in our choice of a method one will be selected that enables us to deal with all possible complications.

Of the many operations devised, the ventrosuspension of Kelly and Olshausen and the extraperitoneal shortening of the round ligaments after the Alexander-Adams method, or some modification of the same, are still the operations in most common use. The vaginal methods of Duhrssen, Mackenrodt and others have not found especial favor on this side of the Atlantic. That ventrosuspension still serves a useful purpose is evidenced by the fact that it is advocated by some of the ablest members of the profession. In doing it, one is enabled to deal with all intrapelvic complications, and it is probably chiefly for this reason that it has held its own against the extraperitoneal methods, notwithstanding the fact that it drags a pelvic organ into the abdomen and creates a source of potential danger that is recognized by all.

The Alexander-Adams operation is applicable only to cases in which the uterus is freely movable and free from pelvic complications. In other words, its application is confined largely to cases where it is least needed and where it can be of the least benefit.

The same argument, I think, obtains, although perhaps to a less degree, to operations done for this condition through the vagina. The advocates of this route insist that they are able to deal as thoroughly with any possible complications found within the pelvis, as through a suprapubic opening. This position, I feel quite sure, will never be accepted by the majority of operators. The slight advantage claimed for the vaginal route can hardly offset its palpable disadvantages. While ready to grant that the majority of cases may be successfully operated on by some method through the vagina, it is certainly true that with tubal infection that has created a mass of matted adhesions involving, perhaps, intestines, or the vermiform appendix, better, cleaner and safer work can be done from above.

The majority of cases require the careful use of the curette as a preliminary step, as endometritis is a common complication. If the cervix is lacerated and hypertrophic, it should be repaired or amputated. Lesions of the pelvic floor should, of course, be repaired. Whatever the operation selected, it should permit of thorough intra-pelvic work, and should be one that restores the normal axis of the uterus, at the same time leaving it free to adapt itself to its normal range of motion. The operation I am about to describe meets these requirements. It was devised by Dr. George H. Noble of Atlanta, and brought out by him in a paper entitled "Intramural Extraperitoneal Anchorage of the Round Ligament for Posterior Displacement of the Uterus." This paper was read before the Southern Surgical and Gynecological Association at its meeting held in Cincinnati last year. In describing the technic I can do no better than to quote freely from Dr. Noble's paper:[1]

"1. A transverse incision is made through the skin, fascia, fat and aponeurosis down to the recti muscles. This incision, in the ordinary subject, should be about 1½ inches above the pubis, and should extend laterally to the outer border of the recti. The recti are separated vertically in the median line and the peritoneum opened in the same direction. The pelvis is investigated, proper attention given to the local pathological conditions, and the uterus raised.

"2. A pair of light compression forceps with teeth in the end (Senn's) is passed through the abdominal opening, and grasps one of the round ligaments about the middle of its intraperitoneal portion. By traction on the forceps the uterus is pulled somewhat to the side of the pelvis which is opposite the ligament held, the peritoneum is drawn away from the region of the internal abdominal ring, and the ligament made taut so that it may be the more readily recognized in the extraperitoneal manipulations to follow.

"3. Now just beyond the outer edge of the rectus, at the end of the transverse incision, the point of a pair of artery forceps is thrust through the posterior sheath of the muscles, but does not enter the abdomen. The forceps is opened and withdrawn, so that an aperture large enough to admit the index finger is left. The finger is introduced through this opening in the preperitoneal fat, and feels the round ligament without difficulty, for it is brought into prominence by tension on the forceps which holds its uterine end.

"4. The finger, passed through the opening just described, is hooked under the extraperitoneal portion of

1. Transactions Southern Surgical and Gynecological Association, 1903, p. 217.

the ligament from below upward, and draws it up into the wound. The sheath of the ligament is then split open by blunt dissection. The sheath and the peritoneum are stripped back in the direction of the uterus, completely divesting the ligament of its covering. It is then drawn out of the wound, and forceps slipped underneath retains it until the opposite ligament is raised and denuded in the same way. If the uterus has been in a state of marked retroversion, the ligaments will have become so attenuated as to allow their approximation in the median line in front of the recti, which approximation will restore the uterus to its normal position.

"5. When it has been determined that the ligaments are long enough to meet in the median line they are each left looped over forceps, while the peritoneum of the median incision and the recti muscles are closed with continuous kangaroo or catgut sutures.

"6. The ligaments are next approximated in front of the recti and tied together.

"7. Now, beginning in one angle of the transverse incision, the cut edges of the aponeurosis are stitched together with a continuous kangaroo suture. When one or two loops of the suture have been passed, the needle, in crossing the interval between the two edges, is made to pass through the ligament. It is well also to pick up a little of the muscle on each side of the ligament in order to provide against dead spaces. This process is continued as each successive loop is passed until the center of the incision is reached, when the free end of the suture is clamped and left long. Starting in the other angle of the transverse incision (but looping in a contrary direction, so that when the two sutures meet their free ends may be on opposite sides of the wound), a second strand of kangaroo unites the edges of the aponeurosis on that side and picks up the round ligament and adjacent portions of the muscles as before. The kangaroo tendons are tied together, and the ligaments are thus embedded and firmly anchored between the aponeurosis and muscles.

"8. The structures in front of the aponeurosis are closed in the usual manner."

The advantages of the operation may be stated as follows:

There is but one incision and through it any pelvic complication may be treated.

The operation utilizes the strongest part of the round ligament instead of its distal end. The normal mobility of the uterus is not disturbed, and it is left in the pelvis where it belongs.

It causes no vesical irritation or dysuria if the ligaments are not embedded too low down, and no dragging if they are not brought through too high up.

The anchorage is superior in permanency to all peritoneal attachments; the uterine portion of the ligament will not stretch away.

There are no sutures in fundus to irritate the uterus.

The fixation is extraperitoneal; no irritated point invites subsequent adhesions to abdominal viscera.

The peritoneal investment of the ligament is not drawn into the abdominal walls, producing funnel-shaped depressions and inviting hernia.

It does not interfere with the physiological development of the uterus during pregnancy.

During the last year I have made this operation 23 times. In all but 3 there were intrapelvic or other complications. In 10 the appendix vermiformis was removed, either because of a history of definite recurring attacks of appendicitis, or because from its appearance it was deemed wise to remove it. In one case a broad ligament cyst was removed, and in several diseased appendages were taken out. These are mentioned merely to show that there is no difficulty in doing any necessary intrapelvic work through the transverse incision and separation of the recti muscles. In all the cases local office treatment by means of tampons or pessaries had been resorted to without relief. Most of the cases were in women who are obliged to work, and who preferred to undergo an operation rather than submit to further treatment. The three uncomplicated cases were marked neurasthenics with dysmenorrhea. While the displacement remains corrected, there has yet been no improvement in the dysmenorrhea, and little or none in their general condition. There were no deaths or serious complications following these operations. So far as I have been able to follow the cases the results have been all that could be expected.

THE SURGICAL RELATION OF THE VERMIFORM APPENDIX TO PERFORATION IN TYPHOID FEVER.

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To within a few years, perforation in typhoid fever and its well-nigh fatal consequence, perforative peritonitis, were regarded as complications beyond hope of relief by surgical intervention, until E. Leyden,[1] in 1884, recommended surgical repair as a rational procedure, likening the condition to suppurative pleuritis. Later in the same year, Mikulicz[2] reported three cases of his own, in addition to reviewing the cases previously recorded in literature. In 1886, Dr. J. C. Wilson[3] remarked: "The courage to perform laparotomy at this time will come of the knowledge that the only alternative is the patient's death."

Encouraged by these bold advocates, surgeons throughout the world have frequently reported operations for this heretofore fatal complication, even in the face of so high mortality as 80.64 per cent. (Keen), 73.78 per cent. (Finney) and 88 per cent. (Monad). Yet when we contrast with the above the mortality of 95 per cent. (Harvey Cushing) in cases unoperated on, it gives a sufficient margin to encourage the undertaking.

Our efforts will probably not be crowned with greater success until the clinician can determine the time of rupture in a given case, or the pre-perforative stage as pointed out by Cushing. The greatest possibilities, however, seem to lie in the removal of conditions that would predispose toward perforation.

The prophylaxis, therefore, in perforative peritonitis from typhoid fever is the pivot on which every effort should revolve, until either the cause is removed or accuracy in diagnosis has enabled the clinician to recognize the pre-perforative stage, as prompt interference after perforation has taken place has not evidenced any marked lowering in the mortality table, as shown by analysis of cases recorded by Finney, Cushing, Keen and others.

The appendix vermiformis is the seat of perforation in typhoid fever, according to Cushing, in 9.6 per cent.

1. Transactions of the Association for Internal Medicine, Berlin, 1884, No. 17, p. 258.
2. Sammlung klinischer Vorträge, Richard von Volkmann, No. 262.
3. Phila. Medical Times, Dec. 11, 1886.

of all cases of perforation; according to Fitz, in 3 per cent. of 167 cases; and according to Hopfenhausen, in 7 per cent. of 108 cases. According to Osler, Fitz, Murchison and others, perforation occurs in 3 per cent. of all cases of typhoid fever. It is the cause of death in from 6 to 7 per cent. of all fatal cases. The ileum, according to Finney, is the seat of perforation in 80 per cent., large intestine in 12 per cent., and the appendix in 5 per cent.

It is especially in this 5 per cent. of appendiceal perforations in typhoid fever that the author is interested; first, because of the belief that in addition to the 5 per cent. of perforations in typhoid cases arising from the appendix alone, there is a large number of cases occurring in the ileum and ascending colon that can be directly traced to pre-existing disease of the vermiform appendix, and in support of this belief, the following cases seem to bear witness:

CASE 1.—(March, 1903.) A woman, 26 years of age, a member of a religious order, had been stricken with typhoid fever two weeks before symptoms of perforation of the bowel presented themselves to her attending physician; there had been, however, from the very onset of the disease, in addition to headache, backache and an extensive degree of nervousness, much pain to the right of the hypogastric region, associated with early and continued abdominal tympany; liver dullness was absent, splenic dullness increased.

When seen in consultation on the fifteenth day of the disease, she complained bitterly of severe and constant abdominal pain, especially in the right iliac region, constant nausea and some vomiting; pulse 140, temperature 100. The pulse rate from the beginning of her illness had been unusually high, the chart showing it at no time less than 120. The temperature, which at this time was 100, had ranged during the previous two weeks between 102.2 in the morning to 105, the highest in the afternoon. The pinched expression was pronounced and the patient in every way showed evidence of great illness. The point of greatest tenderness was just above and to the right of the pubes. Blood count at this time showed leucocytes to be 11,000. The patient was again seen four hours later, and a second blood count made, showing leucocytosis 14,000. Operation was at once advised.

Operation.—Under ether anesthesia, an incision five inches in length was made along the outer border of the right rectus muscle. The abdomen was found filled with gas and a large quantity of chocolate-colored fluid mixed with feces that the exudate had made no attempt at walling off. The opening in the bowel was readily found because of its great extent, in the ileum about 10 to 12 centimeters from the valve. The rent in the bowel involved nearly the entire lumen transverse to its long axis. The ileum and several inches of the ascending colon were firmly anchored by well-organized adhesions, evidently of long standing. The appendix could not be brought into the incision because of this firm anchorage of itself and the colon to the outer parietal wall.

The rent in the bowel was closed by means of the Czerny-Lembert sutures, the abdomen flushed with normal salt solution and afterward dried by means of sterile gauze mopping. Plain sterile gauze was packed about the sutured bowel and brought out through the incision, the remainder of it being closed.

Notwithstanding the extreme condition of the patient before, and at the time of operation, she seemed to stand it well, and if anything, somewhat rallied from it. There was certainly at least no pronounced shock following the operation; there was not any pronounced improvement, however, and the patient died sixty hours later.

Autopsy.—Anatomic diagnosis: Perforation of the ileum about 12 centimeters above the ileocecal valve, involving the entire bowel. The deep sutures had held firmly while the Lembert sutures showed that they had been dragged on by some tension which had been exerted on them. Agglutination of the coils of the ileum existed throughout most of the lower right side. The appendix was cicatricial to near its distal extremity, where it was firmly adherent to the lateral wall of the parietal peritoneum. It derived its nutrition entirely from this source. The colon was also firmly bound down. The position occupied by the appendix showed clearly the tension that it had exerted on the closed wound in the ileum; there had been, however, no escape of the contents of the bowel into the general parietal cavity after operation. The adhesions found between the coils of the intestines and also those about the appendix and colon were so firmly organized that they could not have occurred from the appendicitis in this instance.

In going over the earlier history of the patient, I find that she had suffered for some time from dull aching in the right side, though never any decided pain, often extending down the right leg, with spells of nausea, occasional vomiting and obstinate constipation; in other words, a very clear history of an insidious appendicitis.

CASE 2.—(October, 1903). A woman, 22 years of age, married. Was seen in consultation on the fifth day of her illness, which was thought by her attending physician to be typhoid fever, though somewhat in doubt because of the history of an attack of appendicitis, mild in type, some months previous. In the beginning the patient had a chill with headache, backache and some epistaxis. The abdomen was somewhat tympanitic, liver dullness absent and splenic alteration could not be detected. There were considerable pain, which was constant, and marked tenderness on the slightest pressure in the right iliac region, extending up as high as the costal cartilages. There were constant nausea, anorexia and constipation; pulse 120; temperature, when I saw her at noon, 101.8. Previous to this temperature record showed a variance from 101 in the morning to 102.4 in the afternoon. On palpation rigidity was marked and an inflammatory mass could be distinctly felt in the region of the appendix. The tongue was coated with a dirty brown coating and flabby tooth-marked edges.

With the history of a previous attack, therefore almost certainly extensive adhesions, and with the undoubted presence of an acute attack now existing, I felt it was good counsel to advise immediate operation for the removal of the appendix, even in the face of a probably developing typhoid fever, recalling as I did, the clinical picture of the preceding case which I had seen but a few months before.

Operation.—On the seventh day of illness, under ether anesthesia, an incision was made 3½ inches in length directly over McBurney's point. After a search of several minutes an unusually short appendix with the center cicatricial was found embedded in an inflammatory mass behind the cecum. There was no pus present, though the intestines about the ileocecal region were intensely injected, and in several places there was agglutination of the coils of the ileum in the lower two feet. The mesentery glands seemed everywhere greatly enlarged and to the sense of touch so like the appendix that several times during the search they were brought out through the incision in mistake for the appendix. After taking much pains to break up all adhesions the incision was closed without drainage and the patient made an uneventful recovery. Stitches were removed on the tenth day.

The operation in no way interfered with the natural course of the fever from which she was suffering. Microscopic examination of a transverse section of the appendix showed a complete cicatricial obliteration of the lumen.

Blood count on the morning of the operation showed the number of white corpuscles 11,000. Positive diagnosis by the Widal reaction was made on the eighth day, or the day following operation. Temperature throughout the illness showed the highest reached in the afternoon, 103.8, morning temperature 102. The pulse ranged between 100 and 116. The entire course of the disease was characterized by constipation, it being necessary to use enemas whenever bowel movements were secured.

While the pathologic condition found in these two cases does not give the whole truth, it certainly goes far toward presenting a clew along the lines of prophylaxis in perforative peritonitis.

I am thoroughly convinced that in Case 1 the function of the bowel was so impaired by adhesions, not only of the coils of the ileum to each other, but the tension caused by adhesion of the appendix to the lateral parietal peritoneum, which favored solution in the continuity of the bowel at the point of ulceration at the site of Peyer's patches, was entirely responsible for the tremendous rent that took place. This was demonstrable at the postmortem, which showed the great amount of tension on the superficial sutures.

In Case 2, the only interpretation that could be placed on the extensive adhesions, so like those found in Case 1, is that a like result should have been expected. The inflammatory exudate, which takes place after every attack of appendicitis, it matters not how mild the type, is certain to impair to a degree the function of the bowel, not only immediately about the ileocecal region, but often extending over a considerable extent of the ileum disarranging the circulation, and in this way bringing about structural change in the bowel, interfering as well with the fecal current, and together serving as a most potent factor in the production of perforation.

Where the appendix has once been the seat of inflammatory change, a disease like typhoid fever is sure to light up a recurrence, and as at best its powers of resistance are poor, it could hardly be expected to escape rupture within the organ itself, or what would seem more often to take place, rupture of a Peyer's patch, which, if not actually caused by impairment of the function due to pre-existing disease in the appendix, may be regarded as at least favoring it. Not only do the two cases here reported bear out this belief, but many of those recorded, notably two of Osler's cases; one on admission had an inflammatory mass the size of a walnut in the appendix region, subsequently dying from perforation in the ileum, while the other at the autopsy showed perforation of the ileocecal region and the appendix embedded in an inflammatory mass. One of Hare's two cases also showed pre-existing disease in the appendix. Indeed, proof of pre-existing disease in the appendix in cases of perforation in typhoid fever is not wanting if careful analysis be made of the literature on the subject. Toft says that from personal investigation of 300 cases of illness of all sorts, every third person between the ages of 20 and 70, showed evidence of present or past traces of inflammation of the appendix, and that actual structural change existed in 5 per cent. of all bodies examined. Kraussald declares that this percentage is rather too low than too high.

If these percentages can be considered as accurate, it is within the power of the surgeon to reduce the mortality in perforative peritonitis in typhoid fever from 80 per cent. to 73, first by eliminating the appendix as a factor *per se;* second, by freeing the agglutinated intestines from adhesions caused by previous attacks of appendicitis, which afford possibility of still further serving as prophylaxis against occurrence of perforation in the ileum. Most observers agree that acute appendicitis, occurring during the course of typhoid fever, is merely a coincidence, and is probably in no instance the result of the bacillus of Eberth, nor to the general infective process resulting from the fever.

Hopfenhausen[4] shows in a study of thirty appendices removed from typhoid subjects dying from either asthenia or toxemia, that no special change existed in the appendix further than slight cellular infiltration, in no way sufficient to interfere with the function of the organ, and only that change that would be found anywhere in the intestinal tract that is supplied with lymphoid tissue. The type of appendicitis, therefore, that may be looked for during the course of typhoid fever, will usually be the recurrent.

Clinicians are generally agreed that the opinion formerly held of doubting the existence of typhoid fever where bowel symptoms were absent, is entirely erroneous, and as a matter of fact, bowel lesions are, if the bowel be previously healthy, rather atypical than typical symptoms at the onset of the disease.

With this knowledge in mind, when a case of typhoid fever presents among its earliest symptoms pain to the right of the hypogastric region with tenderness, nausea or vomiting, aching or discomfort in the groin, ofttimes extending down the leg, anorexia, and last but not least, rigidity of the right rectus muscle, a relighting up of a pre-existing disease should be suspected, knowing, as we now do, that the right iliac fossa is not tender early in typhoid fever; at least not until after the seventh or eighth day, when the bacillus of Eberth is deposited in the glands of the intestines (Peyer's patches), Immediate laparotomy would seem the only wise course to pursue, removing not only the appendix, but thoroughly freeing the agglutinated coils of the ileum from its tied-down position, which must of necessity impair nutrition of the parts, and consequently diminish its structural resistence.

Dieulafoy states that if an appendicitis exists, the course of the fever will be higher early in the disease, and it may also be inferred that the morning drop in temperature will be less pronounced.

A study of the temperature and pulse in the cases recorded by Finney, Osler, Fitz, Cushing and others confirms this observation, especially in reference to the pulse, which is found to be continuously higher than is found in uncomplicated cases of typhoid fever.

4. Revue med. de la Suisse Romande, Feb. 20, 18.

THE ACTION OF MINERAL ACID ON THE CELLULAR SUBSTANCE OF BACILLUS TYPHOSUS.*

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This research was undertaken for the purpose of ascertaining whether or not the cellular substance of the typhoid bacillus shows any tendency to uniform and definite cleavage under the influence of the mineral acids, the ultimate object being to learn something of the chemical composition and structure of the molecule making up the substance of the cell. In this paper, which must be considered only a preliminary contribution, general results only are given, with the hope of being able to go more into detail subsequently.

METHODS.

The material used in these studies consisted of the cellular substance of a typical typhoid bacillus, which was obtained from the mesenteric glands after death from typhoid fever, and which gave in a typical manner all the characteristic cultural manifestations of this organism. The toxicity of the living culture was tested on rabbits, guinea-pigs and white rats, and then the

* This and the following paper were in a series of studies of bacterial cells, research in the Hygienic Laboratory of the University of Michigan, 1902, read at the Fifty-fourth Annual Session of the American Medical Association, in the Section on Pathology and Physiology.

organism was grown on the large tanks used in this laboratory, and the germ substance obtained in sufficient quantity to carry out the investigations to be detailed later. The germ substance was washed with alcohol, then placed in Soxhlet extractors and the fat thoroughly removed with ether. After this extraction the cellular substance was ground in agate mortars and separated from any traces of agar or other impurity by being passed through fine meshed sieves. As thus obtained, the cellular substance exists as a white powder that is fatal to the lower animals when injected in suspensions in water into the abdominal cavity in the proportion of 1 to 40,000 of body weight.

It has been suggested[1] that the intracellular toxins are not contained as such in the cells, but that they consist of atomic groups or side chains of a more complex molecule. At any rate, to extract them, more active agents than mere solvents have been found necessary. In this research the action of a hydrolytic agent, namely, dilute sulphuric acid, has been tried. It was proposed to find out whether or not this acid produced any definite cleavage—something as to the nature of the split product—whether it was a toxin, a protamin or something else, and also to study the distribution of the nitrogen in the germ substance by aid of the action of the acid.

STUDY OF THE DETAILS OF CLEAVAGE.

First, acids of two different strengths were employed to determine whether or not the split product was affected by a variation in the strength of the acid. Two 10-gram samples of the powdered germ substance were extracted, one with 0.1 per cent. sulphuric acid, and the other with 1 per cent.; extractions being made in the cold first, then of the residue on a boiling water bath, at 110 C., and at 120 C. Extractions of these residues at 134 C. split off nothing further precipitable with the reagent used. The extracts were precipitated with three volumes of 95 per cent. alcohol, the precipitate filtered out, washed with alcohol, dried and powdered.

Two points of interest were observed, namely, that a definite cleavage seemed to take place in both cases, either the weaker or the stronger acid making the separation, and that in both cases the total amount of split product that could be obtained by extraction in this way was practically 1 gram, or 10 per cent. It is interesting to note in passing that two years ago, with the colon bacillus Vaughan obtained in one experiment, from the 50 grams of germ substance used, 5 grams of the substance split off with dilute sulphuric acid, and precipitated by alcohol,[2] which is 10 per cent., as found with the typhoid. The fact that treatment with acids of two different strengths yielded practically the same amounts of split product indicated that a certain definite cleavage had taken place. The figures for the amounts of split product are given in Table 1.

TABLE 1.—RESULTS WITH VARIED STRENGTH OF ACID.

	0.1 per cent. H_2SO_4.	1 per cent. H_2SO_4.
Cold	0.2073	0.2015
Water bath	0.8427	0.8535
110° C.	0.1048	0.2215
120° (1 per cent. instead of 1/10 per cent.)	0.2290	0.0905
	1.0835	1.1690

In both cases no more was obtained by further extraction at a higher temperature, and while in the case of the series with 0.1 per cent. acid, a 1 per cent. acid was used for the extraction at 120; it is probable that several extractions with the 0.1 per cent. acid at that temperature would have accomplished the same result.

All these split products, as well as the final residue, were toxic for guinea-pigs, though not so toxic as the germ powder itself. It may be that the split products are not a single substance, but that they consist largely of some inert body with which the real toxin is mixed. The extracts all give the xanthoproteic test, also a fair Millon's, among the proteid color reactions, and those above 100, the biuret test.

From the 20 grams of germ powder used, there remained, after all extractions, a residue of 1.505 grams.

THE NATURE OF THE SPLIT PRODUCTS.

In order to investigate further the split products, a larger sample of germ substance was used, so that the yield might be greater, and in order to avoid as far as possible any decomposition of the split product by the acid, the weaker acid (0.1 per cent.) was chosen, since it seemed that by repeated extraction as much could be obtained as with the stronger acid. Accordingly, 200 grams of germ substance was extracted with 0.1 per cent. sulphuric acid in the cold, then the residue at 100 C. (flowing steam in the autoclave), and at 120 C. in the autoclave. The exact temperatures used for the smaller samples were found to be impracticable here, because with the larger amount, extraction on the water bath was not successful. Four liters of acid were used for each operation, and the extractions at a given temperature continued until no more was split off at that temperature, when the residue was again treated with acid, and extracted at the next higher temperature used. This required three extractions in the cold, four at 100 C. and two at 120 C. The amount of split product obtained by precipitating the extracts at each temperature with alcohol was the same relative proportion of the weight of the whole sample as the products obtained from extractions of the smaller samples, and the whole was approximately 20 grams, or 10 per cent., as before, the residue remaining this time amounting to 26.96 grams. The extracts each time were precipitated with three volumes of 95 per cent. alcohol, the precipitate after settling being filtered out, washed with alcohol, and then purified by dissolving, so far as possible, in water and reprecipitating with alcohol. In this way the split products were divided into a soluble and insoluble portion. The different soluble portions from each temperature were put together and repurified. The insoluble portions were saved except that at 100 C. This was very small in amount and so slimy and mucilaginous that it was not possible to remove it from the filter, and it was consequently lost. Determinations of ash, phosphorus and nitrogen were made in both the soluble and insoluble portions, and likewise in the final residue and original germ powder. First, the ash was determined, then the phosphorus in the ash. The nitrogen in each case was determined by the Kjeldahl method. The figures are given in Table 2.

It is evident that the extraction in the cold brought down first of all a large part of the inorganic constituents of the germ, among which iron and sodium were found, and it is interesting that the split product which was most toxic, the soluble part at 120 C., was the one containing the largest percentage of nitrogen.

An ultimate analysis was made of the soluble part obtained at 100 C., this being the only one of which there was a sufficient quantity for the purpose. The

1. Vaughan: A study of bacterial cells, Trans. Assn. Amer. Phys., 1902.

2. Marshall and Gelston: Toxicity of the cellular substance of the colon bacillus, Trans. Assn. Amer. Phys., 1902.

powder was dried to constant weight, and its constituents determined with the results given below. Carbon and hydrogen were determined by combustion, nitrogen by the Kjeldahl method, phosphorus in the ash by precipitation first with ammonium molybdate, then with magnesia mixture, sulphur by the alkali method[3] (fusion with potassium hydrate and nitrate, solution of the residue in acidified water, and precipitation as barium sulphate), and oxygen by difference.

TABLE 2.—SOLUBLE AND INSOLUBLE PRODUCTS.

Cold.						100° C.						120° C.						Residue.			Germ.		
Soluble.			Insoluble.			Soluble.			Insoluble.			Soluble.			Insoluble.								
Ash.	P.	N.	Ash.	P.	N.	Ash.	P.	N.	Ash.	P.	N.	Ash.	P.	N.	Ash.	P.	N.	Ash.	P.	N.	Ash.	P.	N.
72.6	.4058	3.75	55.68	0.43	5.89	5.23	.395	10.36	. . .	. . .	. .	3.62	.87	14.5	4.78	1.50	12.26	2.69	.21	13.04	5.7	1.35	11.55
Ash free . . 13.72 . . . . . 13.28 . . . . . 10.913 . . . . . 15.61 . . . . . 12.89 . . . . . 13.434 . . . . . 12.226																							

magnesia mixture, sulphur by the alkali method[3] (fusion with potassium hydrate and nitrate, solution of the residue in acidified water, and precipitation as barium sulphate), and oxygen by difference.

TABLE 3.—SPLIT PRODUCT AT 100° C.

	C	H	N	S	P	O
With ash (5.26 per cent.)	43.73	6.96	10.24	1.13	0.396	30.46
Ash free	46.27	6.28	10.92	1.45	0.403	32.67

There was also an undetermined amount of iron.

The water solution of this split product gave good tests for the biuret, xanthoproteic and Millon's reactions. There was also a Molish's reaction, indicating a carbohydrate group, which was further supported by the fact that after boiling the substance with dilute acid, Fehling's solution was reduced. The split product was evidently proteid in nature, though a compound proteid. It could not have been a protamin, for the protamins are much richer in nitrogen, containing 30 per cent. or more. A comparison of its percentage composition calculated ash free with the percentage composition of ash free animal proteid as given by Hammarsten[4] is worthy of note, although a more extensive comparison with most of the known protein substances shows that its composition more closely resembles that of the group of glycoproteids, the mucin substances, especially that of a mucin from the mucus of sputum, and a mucoid from tendon, as given by Cohnheim.[5] The figures are given below. These glycoproteids, however, differ from the split product in that they contain no phosphorus. Only two phosphorized glycoproteids are known,[6] namely, ichthulin,[7] occurring in carp eggs, and helicoproteid,[8] obtained from the glands of the snail, and their percentage composition does not compare closely with that of the split product. Ichthulin has sometimes been classed with the nucleoalbumins. These phosphorized glycoproteids, like the split product, yield a reducing substance on boiling with acid.

TABLE 4.—COMPARISON PERCENTAGE COMPOSITION OF VARIOUS PROTEIDS WITH THAT OF SPLIT PRODUCT.

	C	H	N	S	P	O	Fe
Split product, (ash free)	46.27	6.28	10.92	1.45	0.403	32.67	+
Animal proteid, (ash free)	50.6	6.5	15.	0.3	0.42	21.5	
	54.5	7.3	17.6	2.2	0.85	23.5	
Mucin from mucus of sputum	48.26	6.91	10.7	+	—	33.1	—
Mucoid from tendon	48.3	6.44	11.75	0.81	—	32.7	—
Helicoproteid	46.90	6.78	8.08	0.62	0.47		+
Ichthulin	53.52	7.71	15.64	0.41	0.48		0.1

On the whole, the indications are that the split product obtained by the action of dilute mineral acid is of the nature of a phosphorized glycoproteid.

Blandine[9] reports the isolation of a nuclein and nucleoalbumin from cultures of the typhoid bacillus, while Brieger and Fränkel,[10] in their work on toxalbumins, found in cultures of the typhoid bacillus a proteid which was toxic for rabbits and which was thought to contain the typhoid toxin in an impure state.

THE NITROGEN OF THREE ACID EXTRACTS.

As has been indicated, there has been evidence of the presence of proteid bodies, so to study the distribution and amounts of the proteid decomposition products as obtained through the action of acid, it seemed expedient to make a more general study of the nitrogen content of the germ as extracted by acid. To obtain some idea as to the amounts of amido, monamido and diamido nitrogen in the decomposition of the germ by acid, represented by ammonia, the monamido acids and the hexon bases and to study their distribution when acids of different strengths were used, a comparative series was made, practically using the method of Hausmann.[11] By this method he determined the amido nitrogen determinable as ammonia, the nitrogen of the diamido bodies, as precipitated by phosphotungstic acid, and that of the monamido acids as found in the filtrate not precipitated by phosphotungstic acid. The method, while it has been severely criticized by Kutscher[12] and others, has still been shown[13] to give valuable *comparative* results, whereby general differences are plainly evident. The method of procedure was as follows:

Three 10-gram samples were extracted for five hours on the sand bath with reflex condensers, using 90 c.c. of 1 per cent., 5 per cent. and 33 1/3 per cent. sulphuric acid, respectively, for the three samples. The residues were each then boiled for an hour with 100 c.c. of water, and this added to the extract, the whole being then diluted to 200 c.c. The ammonia of each extract was determined in two samples of each by distilling with magnesia. Then the total nitrogen of all three extracts was determined by the Kjeldahl method. The extracts were next each made to contain 5 per cent. sulphuric acid, the required amount being added to the 1 per cent., and the 33 1/3 per cent. being diluted with the necessary amount of water. After this, each extract was precipitated with 25 per cent. phosphotungstic acid, and allowed to stand twenty-four hours, when the precipitates were filtered out, washed with

3. Beistle: The determination of sulphur and phosphorus in plant substances, Jour. Amer. Chem. Soc., 1902, 1004.
4. Hammarsten: Physiol. Chem. (Mandel), 1900, 17.
5. Cohnheim: Chemie der Eiweisskörper, 1900, 251 and 259.
6. Hammarsten: Physiol. Chem. (Mandel), 1900, 49.
7. Walter: Zur Kenntniss des Ichthulins, Zeit. f. physiol. Chem., xv, 477.
8. Hammarsten: Studien über Mucin u. mucinähnliche Substanzen, Pflüger's Arch., 1885, xxxvi, 373.
9. Blandine: La Riforma Medica, April 17, 1901; Med. Rec., May, 1901, 807.
10. Brieger and Fränkel: Untersuch. über Bakteriengifte, Berl. klin. Woch., 1890, xxvii, 241, 265.
11. Hausmann: Ueber die Vertheilung des Stickstoff in Eiweissmolekule, Zeit. f. physiol. Chem., 1899, xxvii, 95.
12. Kutscher: Ueber die Verwendung der Phosphorwolframsäure bei quantitativen Bestimmungen der Spaltungsprodukte des Eiweisses, Zeit. f. physiol. Chem., 1900-1, xxxi, 215.
13. Osborne and Harris: Nitrogen in protein bodies, Jour. Amer. Chem. Soc., 1903, 323.

V 4
190

diluted acidified phosphotungstic acid, dried, weighed and powdered, and the nitrogen determined by the Kjeldahl method. The nitrogen was also determined in the filtrates from these precipitates and in the dried residue remaining from the acid extraction. The results are given in Table 5. All the acid extracts gave the xanthoproteic and Millon reactions for proteid, and all, save the 33 1/3 per cent., the biuret test.

TABLE 5.—NITROGEN AS AMMONIA.

	1 %	5 %	33 1/3 %
Amount of extract	200 c.c.	200 c.c.	200 c.c
Wt. N as NH_3 in 200 c.c.	0.0112 gms.	0.0112 gms.	0.0112 gms.

TOTAL NITROGEN OF EXTRACTS (Including N as NH_3).

	1 %	5 %	33 1/3 %
Amount of extract	200 c.c.	200 c.c.	200 c.c
Wt. N in extract	0.4284 g.	0.7044 g.	1.0164 g.

PER CENT. TOTAL NITROGEN OF EXTRACT COMING OFF AS NH_3.

1 %	5 %	33 1/3 %
2.6143	1.4652	1.1019

The amount of amido nitrogen split off was the same in each case, which pointed to a definite cleavage regardless of the strength of the acid. The percentages varied, of course, since the total nitrogen of the extracts was different. The largest amount of total nitrogen was found in the 33 1/3 per cent. extract, and hence the smallest per cent. of amid nitrogen, while the smallest total nitrogen was in the 1 per cent. extract. The amid nitrogen varied from 1.1 per cent. to 2.6 per cent. Hausmann[13] found approximately 1.2 per cent. amid nitrogen in true proteids, which was in accordance with the results of other investigators.

TABLE 6.—CALCULATED FOR THE GERM SUBSTANCE (10 gm. sample used).

Total nitrogen.	Amid nitrogen.	Per cent. of total N of germ as amid nitrogen
11.55 %	0.112 %	0.97 %

The total nitrogen of the germ was determined by kjeldahling samples of the germ powder. The per cent. of amid nitrogen was found from the fact that 0.0112 grams nitrogen was obtained from each of the three extracts from 10-gram samples.

TABLE 7.—NITROGEN OF THE PHOSPHOTUNGSTIC PRECIPITATES.

	1 %	5 %	33 1/3 %
Wt. ppt.	7.8230	12.9902	16.9792
Wt. N in ppt.	0.3014	0.3429	0.2029
Per cent. N in ppt.	2.578 %	2.667 %	1.197 %

The largest amount of diamido nitrogen was found in the precipitate from the 5 per cent. extract. It is probable that the 33 1/3 per cent. acid was strong enough to further decompose the diamido compounds and so lessen their quantity. In working for hexon bases a 5 per cent. acid extract might be expected to produce the largest yield. The per cent. of nitrogen in the precipitate from the 1 per cent. and 5 per cent. extracts were notably close together, and it is of interest that the 2.66 per cent. nitrogen found in the precipitate from the 5 per cent. extract was quite close to the 2.68 per cent. nitrogen calculated by Gulewitsch[14] in the phosphotungstic precipitate of arginin, but the carbon and hydrogen found were about twice what he calculated. His figures were C, 3.44 per cent.; H, 0.74 per cent., while we found C 8.34 per cent. and H 1.68 per cent.

TABLE 8.—NITROGEN OF FILTRATES FROM PHOSPHOTUNGSTIC PPTS.

	1 %	5 %	33 1/3 %
Total amt. of filtrate	200 c.c.	200 c.c.	200 c.c.
Wt. N in whole filtrate	0.0315	0.07189	0.26218

The largest amount of monamido nitrogen was found in the filtrate from the 33 1/3 per cent. extract; the smallest in that from the 1 per cent.

14. Gulewitsch: Ueber das Arginin, Zeit. f. physiol. Chem., 1899, xxvii, 178.

TABLE 9.—NITROGEN OF RESIDUE LEFT FROM THE ACID.

	1 %	5 %	33 1/3 %
Wt. residue from 10 gms. germ substance	8.9680	1.7322	0.7806
Wt. N in residue	0.4632	0.1224	0.0457
Per cent. N in residue	11.6900	11.1064	6.2631

The per cent. of nitrogen in the residues from the 1 per cent. and 5 per cent. acids was not greatly changed from that of the original germ substance (11.55 per cent.), which would seem to indicate that the residue was still undecomposed.

CONCLUSIONS.

From this research it may be concluded that there is present in the cellular substance of the *Bacillus typhosus* one or more compound proteid bodies, one of which, at least, seems to be of the nature of a phosphorized glycoproteid. Further, that proteid bodies are split off by the use of dilute acid, cleavage taking place regardless of the strength of the acid, so long as it is quite dilute; and that the total amount of this cleavage product which can be split off by dilute acid composes about 10 per cent. of the weight of the dry germ substance. And, lastly, that the cleavage of amido nitrogen by acid is definite regardless of the strength of the acid; that the largest amount of diamido nitrogen is obtained by the use of 5 per cent. acid, as compared with that obtained by the use of 1 per cent. and 33 1/3 per cent., while the largest amount of monamido nitrogen is found in the 33 1/3 per cent. acid extract.

THE CHEMISTRY OF BACILLUS COLI COMMUNIS.*

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In a previous paper[1] I have given a résumé of the literatupe on the chemical composition of bacteria, and a report of some preliminary work on the colon bacillus. This work demonstrated that the dried germ substance after extraction with alcohol contains 8.6 per cent. of ash, one-third of which ash is phosphorus, while sodium and potassium are the most abundant metals. Extraction with dilute sulphuric acid and treatment of the residue with a weak solution of sodium hydrate sufficed to bring practically the whole of the germ substance into solution. In the acid extract indications were found of xanthin and hexon bases, carbohydrate, much phosphorus and a toxic substance insoluble in alcohol. From the alkaline extract a nuclein body containing 2.93 per cent. of phosphorus was obtained, and evidence of carbohydrate was found. In these preliminary experiments the amounts were too small to admit of the purification and identification of the products, but they served to show several lines of work that could be profitably pursued. Along two of these I can report progress, although neither is completed.

Pure colon cultures obtained from feces were grown on 2 per cent. agar in the large incubating tanks used in this laboratory. After from seven to fourteen days the growth was removed, freed from agar, extracted first with alcohol and then with ether, dried and pulverized. This material was heated on the waterbath for an hour, with forty times its weight of 1 per cent. sulphuric acid, and filtered. The extract was poured into from three to five volumes of alcohol. The precipitate formed was washed with alcohol until the washings were

* See footnote to previous article.
1. Trans. Assn. of Amer. Phys., 1902.

no longer acid, then dissolved in water and reprecipitated with alcohol. When this precipitate first comes down it is white, flocculent and voluminous, but it darkens on exposure to the air so long as it is moist. With care it can be obtained as a light-colored powder. This substance holds moisture tenaciously. After standing for six months in a bottle with a glass cap, samples absorbed water in the process of weighing in an open watch glass. Small samples (0.5 g.) on watch glasses in vacuo over sulphuric acid dried to a constant weight in ten days, or in a weighing bottle at 98 degrees C. in from seven to eight days. Larger amounts heated for a few days at 98 C. and then in an oven between 105 and 110 C. required still longer time, and occasionally, but not invariably, showed signs of decomposition before becoming constant.

This substance liquefies on burning, gives off volatile products with the odor characteristic of nitrogen compounds, and leaves a dark residue. Hammarsten[2] says of the nucleins that they yield an acid coke containing metaphosphoric acid, which is consumed with great difficulty. Probably the same occurs here, and in burning the organic matter out of the liquid mass, some of the mineral constituents are volatilized. For this reason determinations of ash are unsatisfactory. An average of several estimations gives 30.74 per cent. of incombustible and non-volatile matter. The amount of inorganic matter is probably even higher, and includes the metals present in the organism as integral parts of the cell or taken up from the alkaline culture medium and from the tank. All these would be seized with great avidity by the acid used in the extraction. The sulphates thus formed appear in the alcoholic precipitate. The ash is not wholly soluble in either nitric or hydrochloric acid. It contains sulphate, as shown by barium chlorid and by the silver coin test, and also phosphate, as shown by ammonium molybdate.

Determinations of phosphorus in the ash by the molybdate-magnesia method show that 5.3 per cent. of the substance is phosphorus. Sulphur was determined by fusion with potassium hydrate and potassium nitrate and precipitation as barium sulphate. This element was found to be present to the extent of 9.22 per cent. Nitrogen determinations by the Kjeldahl method give 6.49 per cent. Comparing these figures with the results obtained from the germ substance, we have the result shown in Table 1.

TABLE 1.

	Ash	N	P	S
Germ substance	8.61	10.65*	2.87	none in ash.
Cleavage product	30.74	6.49	5.3	9.22
Cleavage product, ash free	....	9.40	7.68	....

* Air-dried samples not at constant weight were used for this determination.

This acid cleavage product dissolves in water giving an opalescent solution and is acid to litmus. The solution becomes clear and transparent on the addition of a trace of alkali. It gives a very slight biuret test, possibly due to a trace of proteid carried down with the precipitate. There is too much sulphate present for a satisfactory Millon test. Nitric acid reacts vigorously and gives a sharp xanthoproteic test. It gives a good furfurol test with a-naphthol, but does not reduce Fehling's solution either before or after boiling with HCl. The toxicity of this substance was discussed in the paper already referred to.

HEXON BASES.

Since a chain of six carbon atoms seems to be the favorite combination for the carbohydrates found in nature, it is certainly interesting that Kossel and others have found the open chain of six or five carbons in so many forms of albumin. For in animal metabolism a large part of the proteid is changed into carbohydrate, and as Cohnheim[3] suggests, this change can be most readily accomplished by oxidizing preformed chains of six carbon atoms. In view of Kossel's[4] theory that the three hexon bases, histidin, arginin and lysin, are fundamental constituents of proteids, and thus a necessary part of the molecule, it seemed desirable to determine their presence or absence in the bacterial cell, especially as I have found no record of such an investigation. To be sure, if tuberculosamin[5] is like other protamins, it contains hexon bases, but in the article cited there is no mention of this point. In the isolation of the bases Kossel and Kutscher's[6] method was followed with some modifications. The germ substance was boiled with acid for several hours. The xanthin bases were removed by addition of silver nitrate to the acid solution.[7] Histidin was precipitated by silver nitrate and barium hydrate to slight alkalinity; arginin by silver nitrate and barium hydrate to excess; and lysin by phosphotungstic acid.

In the first series of experiments at every step in the process, indications pointed to the presence of all these bases, but in the end, sticky hygroscopic substances were obtained, and these would not crystallize. In two sets of experiments frequent determinations of the amount of nitrogen in the solution were made by the Kjeldahl method; 173 g. of air-dried germ substance was boiled with nine times its weight of 33 1/3 per cent. sulphuric acid. This was filtered, and the residue boiled with water until the washings gave only a slight precipitate with phosphotungstic acid. The extract contained 18.37 g. of nitrogen; 10.62 per cent. of the germ substance, or 96.53 per cent of the total nitrogen in the germ. The residue contained 0.659 g. of nitrogen. After precipitating the extract with phosphotungstic acid there was left in the solution 9.655 g. of nitrogen, which is 5.58 per cent. of the germ substance; 50.73 per cent. of the total nitrogen, or 52.56 per cent. of the nitrogen of the extract. The phosphotungstic precipitate then contains 8.715 g. of nitrogen; 5 per cent. of the germ substance, 45.8 per cent. of the total nitrogen, and 47.44 per cent. of the nitrogen of the extract.

Following the common assumption that phosphotungstic acid separates the monamido from diamido compounds, these results can be expressed in Table 2.

TABLE 2.—DISTRIBUTION OF NITROGEN IN EXTRACT WITH 33 1/3 PER CENT. ACID.

	Grams.	Per cent. of Germ Substance.	Per cent. of Total N in Germ Substance.	Per cent. of N in Extract.
Germ substance	173.	.....	.....	.....
N in extract	18.37	10.62	96.53	100.00
N in residue	0.659	0.34	.....	.....
Monamido N	9.655	5.581	50.73	52.56
Diamido N	8.715	5.04	45.8	47.44

In another series of experiments the nitrogen was determined at every step; 100 g. of germ substance was extracted repeatedly with 5 per cent. sulphuric acid.

2. Physiol. Chem., 1896, 87.

3. Chemie der Eiweiskörper, 1900, p. 67.

4. Ueber die Constitution der einfachsten Eiweisstoffe, Zeit. f. physiol. Chem., 1898, xxv, 186.

5. Ruppel: Zur Chemie der Tuberkelbacillen; Zeit. f. physiol. Chem., 1898, xxvi, 218.

6. Beiträge zur Kenntniss der Eiweiskörper. Zeit. f. physiol. Chem., 1900, xxxi, 165.

7. Kutscher: Chemische Untersuchungen über die Selbstgährung der Hefe, Zeit. f. physiol. Chem., 1901, xxxii, 59.

TABLE 8.—DISTRIBUTION OF NITROGEN IN EXTRACT WITH 5 PER CENT SULPHURIC ACID.

	Per cent. of Germ.	Per cent. of Total N in Germ.	Per cent. of N in Extract.
Total N	10.65	.....	.....
N in extract	9.58	89.99	100.00
Humin N	1.48	13.90	15.81
N removed by precipitation of:			
xanthin bases	0.464	4.36	4.84
histidin and arginin	1.736	16.31	18.01
N in solution for histidin	0.454	4.27	4.74
after precipitation with phosphotungstic acid	0.258	2.36	2.72
N in solution for arginin	0.057	0.17	0.56
after precipitation with phosphotungstic acid	0.223	2.09	2.33
N in solution for lysin	2.22	20.85	23.50
N in solution for monamido compounds	1.704	16.00	17.78

Comparing these two tables, the extract with 5 per cent. acid appears to contain a larger proportion of diamido compounds and a less proportion of monamido compounds, but the results were disappointing. The persistence of certain proteid reactions, the sticky, hygroscopic residue, that resisted all devices for crystallisation, point toward the presence of albumose, peptons or similar bodies.[8] The various reagents also failed to give as sharp separations as they should were the hydrolysis complete; hence, the use of the weaker acid was discontinued, although it is possible that with longer boiling it would have sufficed. By repeated reprecipitation or after more vigorous hydrolysis crystalline compounds were obtained. In view of the discussion on the value of phosphotungstic acid in separating monamido and diamido compounds, as well as the difficulties which various investigators have encountered in obtaining crystalline products in searching for hexon bases, it is perhaps well to give these data.

The silver precipitate of the histidin fraction was decomposed, reprecipitated by mercuric sulphate,[9] decomposed again with hydrogen sulphid, treated with hydrochloric acid and concentrated. The silver precipitate from the arginin fraction was decomposed and treated with nitric acid. In both cases crystals were obtained which await purification and identification. The phosphotungstic precipitate of the lysin fraction was decomposed with barium hydrate, concentrated to a thin syrup and precipitated with alcoholic picric acid. Beautiful, slender needles were obtained corresponding in appearance and decomposing temperature to the data given for lysin picrate, and to lysin picrate from fibrin and gelatin. This picrate yields a chlorid corresponding in appearance and melting point to the chlorid of active lysin. This work will be reported in detail as soon as possible after its completion.

It is interesting to note the similarity between bacterial proteid and other proteids, as illustrated by this and other investigations. In my former paper it was suggested that the cell studied was made up largely of glyconucleoproteid. With Aronson's[10] osazone from diphtheria bacilli, the xanthin bases obtained by Nishimura[11] and others, and these crystalline products from the colon germ, have been obtained from bacteria, well-characterized decomposition products representing the three great complexes of this class of substances.

8. Hausmann: Ueber die Vertheilung des Stickstoffs im Eiweissmolekule, Zeit. f. physiol. Chem., 1900, xxvii, 95.

9. Kossel and Patten: Zur Analyse der hexon Basen, Zeit. f. physiol. Chem., 1903, xxxviii, 39.

10. Zur Biologie u. Chemie der Diphtheriembacillen, Arch. f. Kinderheilkunde, 1900, xxx, 23.

11. Untersuchungen über die chemische Zusammensetzung eines Wasserbacillus, Arch. f. Hygiene, 1893, xviii, 318.

Anesthesia.—In many cases, more skill is required to give the anesthetic than to do the operation.—Stone, in *Colorado Medical Journal*.

INSUFFICIENTIA PYLORI.*

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Too long has the unfortunate opinion prevailed that a chronic dyspeptic is doomed to lifelong misery, if not, indeed, to suicide, which too often is the tragic finale to his existence. The recognition of insufficientia pylori as one of the causes of chronic dyspepsia is of paramount importance, as it leads to almost miraculously quick improvement. This is my opinion, based on over 50 consecutive and successful cases.

One hour after Ewald's test breakfast (I shall use here test meal and test breakfast as synonyms) the healthy stomach should yield from 30 to 50 c.c. of chyme, the solid part of which should be well pulverised and the fluid part very thin. The chyme should readily filter. Not always, however, do we meet such conditions. There are pathologic variations on either side of the normal, both as to quality and quantity.

NORMAL GASTRIC ACTION.

Insufficientia pylori is the condition in which nothing or possibly but 1 or 2 c.c. of chyme are aspirated one hour after the test meal; this is because the pylorus either does not close at any time or does so insufficiently for a shorter period than is normal. I shall beg your indulgence if I begin with the cause of the physiologic, clonic closing of the pylorus on introducing anything into the gastric cavity.

The presence of matter in the stomach causes its muscular fibers to contract, the degree of such contraction being in direct relation to the degree of the irritant. Normally, the exciting cause is not so great as to throw at once the entire stomach into one convulsive contraction, but the contraction begins at the fundus and travels toward the pylorus. While one band of muscle fibers contracts, the next band begins to relax. These successive contractions we call peristalsis. Let me say here, in parenthesis, that respiration has a decided influence on peristalsis; inspiration aids the motility of the stomach. When the peristaltic waves finally reach the end of the stomach, the pylorus, this likewise contracts, just as does the stomach. But, although the cause and the mechanism are identically the same, the effect on the pylorus is different from that on the stomach in general. The same cause and the same degree of contraction which produces in the stomach cavity but a diminution of its diameter, causes in the pylorus its entire occlusion. This is very readily explained by the difference between the diameter of the stomach cavity and the narrow lumen of the pylorus. The pylorus, having a very small diameter, needs but little contraction to occlude its entire lumen. No difference of force, cause or mechanism is required to explain the physiologic, clonic closure of the pylorus during gastric digestion. What produces general gastric peristalsis also produces closure of the pylorus; the closing of the pylorus must not be regarded as anything else than ordinary peristaltic contraction.

THE ABNORMALITIES.

Starting from these normal physiologic premises, we can reason that what will cause greater general contraction of the stomach will so much more intensify the closure of the pylorus, but as the general stomach cavity has a considerable lumen to contract on, while the same aggravated contraction reaching the pylorus has

* Read at Albany before the Medical Society of the State of New York, Jan. 26, 1904.

nothing more to contract on than its own anatomic structures, it is evident that such anatomic structures will suffer the consequences of such repeated and spastic contractions. Our knowledge of inflammation, its causes and its manifestations, would at once make us anticipate inflammatory changes of the pylorus under the conditions just mentioned. But, beside this, which I might call an intrinsic cause, there is the additional element of the violent impact of the chyme which is thrown against a closed pylorus by the aggravated contractions of the muscle fibers of the stomach. Thus we see two forcible factors for the production of inflammation of the pyloric portion. This explains why autopsies show, in by far the largest majority of cases, only the pyloric portion to be the seat of lesion. In fact, I believe we should be justified in discarding the name of gastritis in the majority of instances and substitute the name of pyloritis instead.

The muscularis of the stomach naturally has a muscular, hence a dynamic, function, and, in accordance with the work to be performed, varies its development. In the grain-eating birds, for instance, the muscular layer of the stomach is enormously developed, because the grains have first to be crushed before they can be acted on, chemically, by the digestive secretions. Likewise in man the stomach completes the grinding begun by the teeth. This is a fact which is attested by the very finely pulverized chyme so often aspirated from the stomach. But is this very finely pulverized chyme really the result of only dynamic, of only muscular, activity? Yes. This affirmative answer can be verified in both direct and indirect ways. I have many times experimented with artificial digestion, and although I did obtain all the chemical results, I never did get the solid parts finely pulverized until it was thoroughly stirred up with a clean glass rod. The clinical proof presented itself to me in a case of pyloric stenosis, in which I first ascertained that the stomach was empty before I gave the ordinary test meal. One hour after it I aspirated the entire ingested meal, and, notwithstanding that the general acidity was as low as 18 (even dimethyl scarcely reacted) the ingested roll was recovered in a very finely pulverized form. On the other hand, there are abundant clinical instances in which the chyme is coarse, although there are sufficient acid values.

These facts I consider beyond doubt to be entirely conclusive that finely pulverized chyme is the result of mechanical crushing. Crushing implies that the object to be crushed must come between two opposing forces—the driving and the resisting force. In the stomach the contracting muscle fibers represent the driving and the closed pylorus the resisting force. The stronger these two forces act on one another or the longer the grinding continues, the finer pulverized will be the crushed product. Again, the finer the pulverization the longer or the stronger was the muscular contraction, and the longer did the pylorus offer resistance. We therefore must admit that to obtain a very finely pulverized chyme the ingesta must be subjected to the action of the forces mentioned, sufficiently long, which means that the ingesta must remain in the stomach long enough to be acted on, dynamically, by the muscular contraction of the stomach. In the same manner the aspiration of a chyme which presents the very fine pulverization, termed by me the "floury layer," attests the existence of at least normal if not hypermotility of the stomach, and this irrespective of the quantity aspirated. Nay, as it needs a prolonged contraction of muscle fibers also of the pylorus, as it needs a longer closing of the pylorus to produce the "floury layer," it is evident that the closed pylorus also prevents the passing of chyme into the intestine; hence a larger quantity will be aspirated. The larger the quantity and the finer the pulverization the longer did the pylorus offer resistance, the longer was the pylorus closed. Since, however, a protracted closure of the pylorus could not exist without active peristalsis (as explained above), and since a prolonged closure of the pylorus obstructs the escape of chyme, and hence leaves more chyme to be aspirated, it follows that the aspiration of a large quantity in which the "floury layer" is present signifies that in such a stomach peristalsis was very active.

This is a view diametrically the reverse of what is at present recognised. We are taught that a stomach which yields a large quantity of chyme after the test breakfast is atonic. We have been made to believe that the presence of a large quantity of chyme after the test meal incriminates the integrity of the muscular power of the stomach; it is being assumed that because the ingesta did not pass the pylorus in sufficient quantities in the given time it is ample proof that the stomach wall, for some reason or other, has not attempted to expel its contents. With the same propriety we might accuse the prisoner of not attempting to come out of his cell. Supposing the cell is locked and bolted and all efforts of its inmate to get out of the cell are frustrated because of the door being locked? The tonus of muscular fibers is judged by its respective power. But when we aspirate a "floury layer," such facts prove muscular activity. To accuse a stomach of atony, which yields after a test breakfast a large quantity of chyme of which the solid part is very finely pulverized, is a crime. Such stomachs are not only not atonic, but the very contrary; they are hypertonic. The large quantities aspirated in such cases is due to the stenotic condition of the pylorus. This stenosis is, most usually, due to a pathologico-chemical condition, and which I described as "stenosis of the pylorus from irritation." It is peculiar and possibly significant that both Boas and myself have independently worked on the same theory at the same time. Boas in his article on Magensteifung[1] also refutes the present assumption that the aspiration of a large quantity of chyme after the test breakfast signifies atony. He also acknowledges a stenosis of the pylorus as the cause of the large aspirated quantity.

I again wish to impress that quantity does not impugn the integrity of the muscular coat of the stomach one way or the other; quantity is dependent on the respective condition of the pylorus. A prolonged contraction of the pylorus offers prolonged resistance to the escape of chyme from the stomach, hence a larger quantity will be aspirated. A pylorus, the contraction of which is lessened or entirely abolished, offers little or no resistance at all to the exit of the chyme, hence a much larger quantity of the ingesta will pass the portals of the intestines unmolested, unchecked, and hence little or no chyme at all will be obtained on aspiration. There is no increase of motility in this condition, as there is no impairment of the muscular activity when a large quantity is aspirated. The absence of chyme one hour after the test breakfast can not be ascribed to hypermotility, as hypermotility means hyperactivity, which is synonymous with hypercontraction, and hypercontraction, as explained above, must produce more spastic con-

1. Deutsche med. Wochenschrift, March 6, 1902.

traction of the pylorus. Hypermotility of the stomach, therefore, effects larger quantities to be retained in the stomach. The presence of a large quantity of chyme after the test meal means stenosis, the absence of chyme denotes insufficientia pylori. But very little peristalsis is necessary to bring ingesta past an open pylorus; mere gravity will do it. Furthermore, the absence of pyloric resistance has a decided negative effect on the grinding up of the ingesta. Because of the absence of one of the two forces, mentioned above as necessary for the grinding, because of the absence of pyloric resistance by reason of its non-closure or insufficient closure, the ingesta can not be acted on dynamically, and therefore it is, that whatever little is aspirated in the first stages of insufficiency is coarse.

Insufficientia pylori presents itself in several stages. It begins with a simple weakness, if I may use this expression, when possibly yet 1 or 2 c.c. of coarse chyme is aspirated and ends with its complete inability to contract. In this last stage the ingested food rushes immediately past the pylorus; the patient practically has no stomach. Between these extremes there are many gradations. We may not find any chyme at the end of one hour, but there may be some, three-quarters or half, or one-quarter of an hour after ingestion, and it is our duty to absolutely ascertain the exact condition.

ETIOLOGY.

Insufficientia pylori is the natural and logical successor to stenosis of the pylorus (I am not speaking here of the stenosis of an organic nature). It is but a question of time when the pylorus, too long insulted by spastic contractions and by the violent impact of food together with other chemical causes, will succumb to such maltreatment with the inevitable inflammation as the result. And once this is chronically established, we can easily foresee the consequences; that finally, in the very last stage, anadenia gastrica should result, need not surprise. Very seldom is insufficientia pylori the sequel of a retrograded neoplasm as described by Ebstein.[1] Directly, insufficientia pylori is caused by a chronic pyloritis. As remote causes are organacidia gastrica,[2] chronic alcoholism, loss of teeth and the gulping down of food.

SYMPTOMS.

Per se insufficientia pylori gives no symptoms, and it may exist for a long time without the patient being aware of it. What the patients complain of is due to faulty intestinal digestion; and usually the patients do not seek medical advice before the intestinal functions are interfered with. The most predominant and the most constant symptoms are due to gas formation in the bowels. This is variously interpreted by the patient as boiling, running around, shaking, heaviness, tension, sensation of bearing down, sensation of insufficient defecation. A woman about the climacterium thought she positively felt "quickening," notwithstanding her menstruation having been regular up to the time of her consultation. The appetite is variable, and may be good or absent, but there are definite causes for each. When the gases formed in the intestines are not irritant, then the distension causes anorexia. When the gases are volatile, fatty acids, then the attendant contractions of the upper part of the intestine due to the presence of such volatile acids, give the sensation of hunger. In the prevailing of the latter contingency, besides the very good appetite, will be diarrhea, cramps and rectal tenesmus, and, if the volatile fatty acids make their way through the upper passage, there will be burning along the route and thirst. Constipation is not infrequent, and I am now inclined to believe is due to distension of the bowel by non-irritating gases. Often constipation alternates with diarrhea, the diarrhea being subsequent to and caused by the constipation. The stagnating feces finally undergo putrefactive changes with the evolution of irritating gases, which then irritate the bowel, thus bringing on peristalsis. Headaches may or may not be present, but as yet I have not been able to ascertain the exact cause of each. The dictum that constipation and headaches invariably go together I can not corroborate, although it holds good in most instances. Flashes of heat and cold are very common, especially in the evening after the somewhat heartier meal, which the insulted intestines struggle to digest. It can be safely assumed that one who abuses his stomach will also abuse his bowels, if not warned in time. But often patients are not aware of serious gastric trouble or of any digestive interference. Occasional "spells" they take very lightly, often as a matter of course. The following case illustrates this:

A young man, aged 28, a traveling salesman, had been coughing for some three years, during which time he consulted several general practitioners without being helped. Finally, being alarmed about his cough, he went to a prominent specialist on diseases of the chest, who, after the third visit, came to the conclusion that most likely the cough was caused by some disorder in digestion. The patient then came to me, rather surprised at the specialist's finding, as he could not remember any serious attacks of indigestion. That patient's stomach had already advanced to the condition of insufficientia pylori. His cough stopped permanently after the sixth day (he came for treatment every day).

Vomiting may or may not be present. Beside those there may also be other symptoms.

DIAGNOSIS.

Insufficientia pylori can not be diagnosed without a test-meal, nay, several test-meal examinations, one to follow the other one day after the other. Absence of chyme one hour after the test breakfast, or at most 1 or 2 c.c. of coarse particles, is the diagnostic criterion. The diagnosis should be corroborated by another test meal the very following day. In a tentative way the diagnosis may be assumed in cases of chronic alcoholism or in patients with few or no teeth. Neither sex nor age gives any clue. The diagnosis of insufficientia pylori having been made, it becomes our duty to ascertain exactly the patient's condition. The question, and a very important one, is, how soon is the stomach empty? Does the stomach functionate at any time, or has the patient practically no stomach? These questions are answered by aspirating the stomach at various times after the test breakfast is given. If the stomach prove to have no chyme one hour after the test meal, we next day aspirate three-quarters of an hour after the ingestion, or thirty, or even fifteen minutes after the eating. On this exact knowledge is based the successful treatment. When the case is properly explained to the patient, he will usually corroborate with the physician. If we can manage it all real medications should be stopped for a few days before our examinations. Of the physical examination only gastric inflation may be of some avail. In the last stages of insufficiency the stomach can not be inflated by any means. But one must be careful not to mistake a dilated stomach for insufficientia pylori,

2. Deutschen Arch. f. klin. Med., vol. xxvi.
3. Medical Record, Sept. 6, 1902.

should he choose for inflation CO_2 developed in the stomach. The usual doses for inflating a stomach are half a teaspoonful each of bicarbonate of soda and of tartaric acid, each to be taken separately and in immediate succession with about two ounces of water. If these do not inflate we need not yet conclude on insufficiency.

PROGNOSIS.

If not attended by too severe complications insufficientia pylori has an excellent prognosis, no matter how old is the patient or how long the disease had existed. I have seen cases, in my own practice and in consultation, in which the conditions prompted the gravest diagnoses and where improvement had been despaired of, respond almost miraculously to the proper treatment. A marked turn for the better is positively seen in a very few days, often even within a day or two after treatment has been begun. Patients who have suffered for years from chronic dyspepsia get well, gain flesh and change their melancholy into buoyancy and optimism in a very short time. Thus I had among my patients a colleague about 50 years of age, who until recently taught diseases of the stomach, and who had to give up his position because of ill health, greet me on the twelfth day after the test-meal examinations with a hearty hand shake, a broad and cheerfully smiling "How do you do," and a slap on my shoulders. This greeting needed little interpretation. My esteemed colleague had not a trace of chyme even half an hour after his test breakfast. The usual average for the treatment has proved to be about three months. Often the patients are inclined to overbear, exhilarated by the rapid success, and are tempted to do a little experimenting themselves. Against this the physician must guard. A return of the pylorus to the normal can only be expected in the young. I have seen this several times.

TREATMENT.

As everywhere else, the etiologic moment must be kept in mind. Alcoholism and gulping down of food will naturally be interdicted. It is much better to go without food than to swallow it down unmasticated. If circumstances do not allow the patient sufficient time for his meal, then let him have such food as needs no mastication. Mastication must at all times be complete. Loss of teeth must be supplanted by artificial ones. Especially to the poor must we explain the necessity of thorough mastication. But, as they can not always get a set of good artificial teeth, we must advise them to have the mastication done artificially. All cereals and vegetables should be well boiled and eaten in the form of puree. As to meat, my advice is to prepare it any way they like, and after it is done, to cut it up into very small pieces, which is best done by a meat-grinding machine, which is very cheap.

The dietetic treatment is of chief importance. The object is not to introduce any acid food nor food which develops gases. Let us also remember that sweets very quickly form acids in the digestive canal, consequently also these will be omitted from the dietary. Coffee, tea, spirits, fermented liquors, CO_2 containing waters, too much milk, cabbages, peas, beans, radishes, turnips, spices, salads, whole grain bread and other cereals with their husks (the easily fermenting cellulose) on, fruits, especially grapes, peaches, plums and prunes should be forbidden. Excluding these, the patient has a free choice of food but not of drink. Clean, filtered water and milk are about all the patient can have. Of mechanical treatment only lavage is to be mentioned if mucus is present. I have as yet not tried electricity.

The medicinal treatment must be directed to help the intestine, but at the same time not to interfere with any gastric digestion, which may still be present. It is for this reason that several test-meal examinations are necessary. We must know whether the stomach does have some digestion, and if so, we surely must not interfere with it by giving the alkalies too soon. Bicarbonate of soda, magnesia and the rhubarb and soda mixture are usually sufficient and to be given after meals, the time to be determined by the test-meal examination. So, for instance, if there is no chyme even fifteen minutes after ingestion of the test meal, then the alkalies should be given immediately after meals. If there is some gastric digestion yet a half hour after the test breakfast, then the alkalies will be given between half an hour and one hour after meals. If there is some gastric digestion still present, the alkalies should be given somewhat later when meat is eaten. Pancreatin and papain are very valuable, but we must be sure to get the fresh products; stale products are very apt to be decomposed and cause pain, colics and diarrheas. Strychnin is the drug never to be left out, but it must not be given in small doses. I never begin with less than one-twenty-fifth of a grain. Especially in the chronic diarrheas has the strychnin a magical effect. Cases in which there were daily ten to twenty watery discharges and which have lasted for years, in one case over eight years, have yielded entirely and permanently to strychnin in from three to four weeks. But in these cases the strychnin must be given in rapidly advancing doses. I repeatedly gave one-seventh of a grain three times daily.

For constipation sodium sulphate and liberal quantities of water are of most benefit. The sodium sulphate should be begun with one-half teaspoonful doses in a glassful of hot water half hour before meals; this dose should be diminished gradually according to requirements. When the drinking of large quantities of water is desired, it is best not to tell this plainly to the patient, as he will usually disobey. Any sort of drugs—and by far the most impressive are bitter drugs—can be given in drop doses every two hours in a tumblerfull of water.[4]

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THERAPEUTICS OF INSANITY.*

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Since the insane of Christian countries were rescued by the hand of science from the despotic barbarism of superstition, they have been treated rationally, if not successfully, as persons suffering bodily infirmities. The therapeutics of such treatment may be classified, for convenience, as medical, hygienic and disciplinary. Medical therapeutics consists of the administration of materials supposed to be curative of diseased conditions. That medicines administered to the insane are not always, but are, indeed, seldom curative, is a "huge criticism" of present states of knowledge respecting both disease and medicine.

Were man a rational as well as a reasoning being, it might not be exacting to require of physicians prescribing medicine for the insane to have some knowledge

4. I refer the reader to my previous articles on insufficientia pylori in the Philadelphia Medical Journal, May 24, 1902, and in the New York Medical Journal, Oct. 4, 1902.

* A posthumous paper written for the Section on Nervous and Mental Diseases, New Orleans Session, 1903. It is the last production of its gifted author, whose death occurred June 19, 1903.

of the more intimate relation of function and manifestation to structure, in conditions of both health and disease, as well as a clear perception of the relation of drug-energy to physiologic activities before prescribing. But, considering the present state of knowledge—or ignorance, rather—of such ultimate biochemical facts as are still concealed in the arcana of organization common to the profession, physicians should not be criticised censoriously for prescribing for the insane as they do for others, empirically.

The general trend of empiricism in medicine is—as it ever has been—to antagonise physiologic by medicinal energy. Thus, in treatment of acute mania, manifested by increased mental and muscular activity indicative of excessive elimination of physiologic energy, medicines recognized as sedative are almost invariably prescribed. In the treatment of melancholia, manifested by diminished activity of organic processes, and corresponding indisposition to motion, mental or muscular, stimulants or tonics are as uniformly resorted to. Whether curative or not, in either case statistics should be able to determine.

Purgative medicines are given to the insane, as to other persons, without reference to mental symptoms. Insane persons supposed to be suffering a specific dyscrasia, now recognized as a cause of insanity, become the recipients—necessarily—of what is called "specific treatment."

When I assumed the superintendency of a large state hospital for the insane, nearly forty years ago, the principal drugs in vogue for the treatment of the insane were, leading the list of sedatives, that ancient and respectable drug, opium, and its derivatives, followed by conium, hashesh, hyoscyamus, belladonna, etc., to which potassium bromid, chloral hydrate, sulfonal, trional and other chemicals of great energy were subsequently added.

Of stimulants and tonics in use then were, leading the list, that ancient companion in respectability and use of opium—alcohol—variously embodied, closely followed by quinin, iron, arsenic, zinc and numerous bitter vegetable extracts, since supplemented with phosphorus and strychnia. Favorite purgative drugs were calomel, colocynth, rhubarb, Epsom and Rochelle salts, and various other cathartic or laxative materials.

Thus equipped, therapeutically, the insane were persistently medicated—as they have been ever since—along lines before suggested, of physiologic and medicinal antagonism; modified but little by the suggestions of science, nor entitled to consideration as illustrative of medical progress in any sense. Therapeutically, so far as medication is concerned, our treatment of the insane is not a day in advance of that of Hippocrates; the real and great benefit that the insane have derived from science having been physiologic, hygienic and ethical, rather than medicinal. In some respects, indeed, as an individual observer, I believe the insane are not as well treated, medicinally certainly, if history can be trusted, nor so successfully as they were fifty or a hundred years ago. It is true they are not now bled till they can not wag their tongues nor wave their arms because of loss of energy thus abstracted; nor intentionally mercurialized with the expectation of "attracting morbid activities from the brain to the mouth," as they were in the days of the immortal Dr. Rush. But they have been, and are being, narcotized with increasing frequency and profundity, to a degree of sedation more perilous—however deceptive in appearance—than was accomplished by the great American Sangrado's lancet.

Sound blood we know is not only essential to all healing processes, but is indispensable to continued functioning of all living mechanisms. It is, indeed, Nature's first, last and only trustworthy weapon of offense and defense in her maintenance of human existence. It can not, therefore, be either spilled or poisoned with impunity. Loss of blood, within certain limitations, may be more readily recovered from under favorable circumstances than repeated and profound intoxication is likely to be. In the one case new blood is rapidly supplied to repair loss; in the other, old contaminated blood has to be purified by slow elimination, often leaving permanent injury. The facility of administration of some of the more potent poisons, by the use of our modern, serpent-fanged hypodermic syringe, from which the most violent or obstinately unwilling patient can not escape, to be followed so soon by such charmingly, happifying consequences, silence and repose, has greatly increased temptation to administer them, without serious or philosophic consideration. What relief, indeed, to the overwrought consciousness of friends, nurses and other inmates of a home or hospital ward a physician can give by a magic drop of virus instantly injected beneath a patient's skin, soothing almost instantly the maniac's rage, silencing his voice, and quieting his hyperenergized muscles into a semblance of "Nature's sweet restorer, sleep!" The practice is not curative, however, nor more than exceptionably justifiable in properly constructed and equipped hospitals for the insane. In private practice, the rights of others than the insane may justify such sedation, although not contributive to recovery. A wise engineer, when he finds his machine endangered by an excess of eliminated force, opens wide a valve and lets the superfluous energy escape, with no matter what shrieking and agitation. Nature—by which we mean the small fragment of the universe and such facts and phenomena as have become familiar to us—may not appear to be, at all times, supremely intelligent and rational; but, as a rule, it is safer to trust her than to antagonise her. We appeal with confidence to our own reasoning capabilities, as against Nature's conduct of affairs, forgetting that reason as an intellectual capability is as facile and potent in confirming error as it is in the establishment of truth.

Of stimulating or tonic medicines, as now administered in the treatment of the insane, but little need be said. So long as given in such quantities as do not offend the stomach or impair digestion, they are practically harmless, if not really helpful.

Purgative or eliminating medicines are generally useful in the treatment of the insane, as they are in the treatment of other classes of persons suffering derangement of physiologic functions. Preachers have often been censured for commendation of quack medicines. They do sometimes give good medical advice, as, for example, that given to a sick sister by a good Methodist parson, who, after praying at her bedside, left with her the injunction: "Put your trust in God and keep your bowels open!"

Hygienic therapeutics are in accordance with the suggestions of common sense or human experience, and modern science as well. The primary necessities of all living beings are: air, food, water—and, if human—light, warmth and exercise.

That the self-helpless insane should be environed with reference to all these requirements is a logical affirmation. That they are not, and can not be, so circumstanced in the ordinary homes of the people in this or

any other country, is likewise true. Properly located and constructed public and private hospitals for the insane come as near to supplying all demands indicated as is practicable. Of these prime necessities the value of air and water, as to both quantity and quality, as related to health, is more likely to be underestimated than is that of less important items. Perfect ventilation and abundance of wholesome water commend a hospital more highly than any other characteristics. Without the actual presence of water, organization can neither be effected nor its functional capabilities maintained. It is safe to affirm also that much disease now attributed to auto-infection is sequential to widely prevalent neglect on the part of civilised peoples to make an intelligent use of water; internally more especially than externally.

Keeping one's skin clean is a decent and goodly thing to do. Our skins are so constructed, however, that even "dirt diseases" seldom effect entrance to vital organs through them. Mucous membrane—skin deprived of armor, its "coat-of-mail"—is at all times vulnerable. Keep it clean! Pure water is Nature's solvent and detergent, and should be employed as such with great confidence. In prescribing water for the insane, however, no influence of suggestion need be anticipated, such as attends the recommendation of celebrated mineral water to be drank at or from notable springs, on the part of fashionably neurotic invalids of a different class. The insane are, as a rule, too stupid or too conceited to be thus influenced. The high-sounding names of various baths, as advertised for effect, Roman, Turkish, Russian, electric and others, do not attract attention or inspire confidence or hope when appealing to the insane. And the fact is, that pure water, wherever found, is sufficiently medicinal for all physiologic purposes as a drink; and the modern rain bath of fully equipped hospitals is equal to all therapeutic necessities in the treatment of the insane. The uniform application of heat or cold to the whole surface of the body, at discretion, constitutes the therapeutic virtue of a bath, as warmth and moisture constitute a poultice, without regard to name or materials implicated.

Professional massage, Swedish-movement appliances and other things reminiscent of medical eccentricities of once important pretension as comprehensive systems of cure, may still appeal with some force to the credulous and hopeful, but not to the crazy.

Electricity has never been generally employed in the treatment of the insane, so far as I know. I am informed that electrical appliances are being introduced as part of the equipment of modern hospitals for the insane, but whether for use or display I do not know. I have had many psychopathic patients committed to my care who had been previously subjected to electrical treatment—ignorantly, for the most part, it is to be presumed—none of whom seemed to have been benefited, and some of whom seemed to have been seriously injured thereby. This fact, however, does not discredit the therapeutic value of electricity in the hands of qualified administrators; nor should it discourage anyone from endeavoring to learn more and more respecting its applicability as a force in the cure of disease. It is a phase, however, of universal energy so weird and so intimately associated with human notions respecting supernatural beings, that when exploited as an agent capable of performing miracles in curing disease, appeals so powerfully to the imaginative and superstitious. I have habitually regarded its common use as—if anything more than an "appeal"—doubtfully dangerous. As an appeal, the insane are not affected thereby.

Occupation, manual labor, so much insisted on as hygienically beneficial to the insane, is commendable as both useful and economical. It is applicable, however, almost exclusively, to the conditions of chronic insanity, conditions no longer necessarily pathologic, but because of which their sufferers are permanently impaired and incapable of independent social life.

The same may be said of amusements. Neither the maniacal nor the morbidly melancholy can be amused successfully. The psychic activities constituting the mental ego of the one are too eccentric, of the other too centric, to admit of diversion or entertainment. Nor have I ever known a person suffering from acute mania or melancholia benefited by travel, on either land or water.

Diet, as pertaining to hygienic rather than to medicinal therapeutics, justifies mention in this connection of a long list of fake-foods and pretentious "tissue-builders," liberally advertised by samples and literature, that, in my estimation, are more profitable to the producers than to the consumers. "Build up the tissues" is a high-sounding injunction without a suspicion of commercialism in its tone. One might think, on hearing it announced as from an oracle of science, in connection with recommendations of these new-fangled products, that all a physician need to do in order to induce or compel Nature—however crippled or exhausted her forces—to resume constructive labor and "build up the tissues" is to administer any one of a number of "predigested," "peptonized," "malted" or otherwise hocus-pocus foods; or some chemically composed pabulum so nearly protoplasmic as to build tissues itself without Nature's co-operation or consent. If one trusts the "true-seeming lie," as the red-cross knight did the "false-fair dream" that the magician Archimago compelled Morpheus to forge and send for his deception, as related in Spencer's "Fairie Queen," he will eventually awake from the delusion a wiser if not a better physician.

Disciplinary therapeutics, in the treatment of the insane, is second only in importance to hygienic helps. Loss of self-control and loss of moral sensibility are characteristics of insanity. To meet necessities incidental to such conditions, more or less restraint is essential to the welfare of the insane, and that of others entitled to protection from them. The question of to-day is, as it ever should have been, not one of non-restraint, but of what method of restraining should be adopted for the welfare of all concerned. To say the insane do not require restraint is to say they are not insane, or that they are capable of exercising the rights or privileges of free citizens, an inference whose rationale the very existence of numberless hospitals for their custody as well as cure emphatically denies.

There are three methods of restraining the insane. One is by mechanical appliances; another by the administration of paralyzing medicine; and a third by moral influences. Of these methods, moral influences are sufficient for by far the greater number. In hospital practice the sense of restraint that falls like a shadow from hospital facades and towers on persons committed to hospital care, still capable of some appreciation—ethical and esthetical—is both efficient and salutary. There are exceptional persons, however, who, because of pathologic conditions, are incapable of recognizing moral influences of any kind. Noisy, destructive, belligerent, homicidal and restless, what shall

be done with them? The choice is between mechanical and medicinal means. Restraint by the hands of attendants is as distinctly mechanical as is that by a camisole or a protection bed, and much more exasperating to the patient. Medicinal restraint, I believe, at the present time has displaced to a great extent mechanical appliances in public and private hospitals in this country and Europe. Modern psychiatry has been persuaded or driven by a tidal wave of pseudo-philanthropy, started by the popular acclamation attending the reform inaugurated by Dr. Pinel in France and Mr. Tuke in England late in the eighteenth century, to abandon mechanical appliances for restraining the insane—nominally if not really—under all circumstances. This "great reform," however, like all other sentimental movements looking to the accomplishment of social, political, moral or religious ideals, in the promotion of which important factors of the problem determining the limitations of practicability are generally left out of consideration, overleaped itself and defeated its own ends. That there was demand and occasion for modification of old practices, including needless mechanical restraint, there can be no question. That prohibition of mechanical means, instead of regulation within legitimate limitations, was an error, is to me equally apparent. The inevitable substitution of chemical narcosis, or physical force attended occasionally, however ordinarily concealed, by scandal, can not be said in the full face of facts to have justified the boast or the claim of beneficence to the insane, as a consequence. The outside world approves, unquestionably, of the transition. The outside world judges from superficial appearances, not from carefully observed and analysed facts; the fact, for instance, that this transition from mechanical to other forms of restraint—especially the narcotic form—has been attended by marked diminution of the ratio of recoveries to the number of insane persons admitted to the hospitals of this country and Great Britain.

There may be other factors in the problem, but none so conspicuous or so suggestive. If, as is now believed, much insanity is attributable to auto-intoxication, what should be rationally expected from repeated and profound intoxication of persons already impaired, mentally, by chemicals capable of obliterating consciousness by paralyzing its mechanism?

It was not my purpose, however, to reopen this ancient burr; nor do I wish now to go on record in this, my last contribution to the literature of psychiatry, as an "old fogy," opposed to whatever is new or progressive. "Ancientism" has never been a feature of my religion, nor is it now. Looking before and after, it has ever been my habit to endeavor to see things stereoscopically as far as practicable, recognising the fact that the wisest of mankind are not infallible, nor the best free from error.

Revulsion Treatment of Vomiting in Pregnancy.—Dumas applies revulsion to the breasts to divert to this point the tempest in the uterus. He believes that the close connection between the breasts and the genitalia is sufficient to explain the prompt benefit derived. He describes his technic in a communication to his local paper, summarized in the *Journal de Méd. de Paris* of March 6, 1904. He prefers cupping for the purpose, using a semispherical cup that fits airtight over the breast, with a rubber bulb to aspirate the air. The cup must be large enough to avoid all contact with the breast except at the base. He applies it morning and night and leaves it in place on each breast for twenty-five to thirty minutes. He suggests that this revulsion to the breasts might be found useful also in chlorosis or disturbances accompanying puberty.

THE ULTIMATE RESULTS OF THE BLOODLESS REPLACEMENTS OF CONGENITALLY DISLOCATED HIPS.*

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CHICAGO.

In selecting the subject of this paper I have been actuated by divers motives, but chiefly by the hope that a straightforward presentation of the facts, insofar as I have been able to obtain them, may correct certain delusions and false impressions that have crept into the minds of medical men and others, mainly through uninformed writers of sensational newspaper articles.

For the past five years no subject in orthopedic surgery has been of greater interest to me than this one—the bloodless replacement of congenitally dislocated hips. For the past three years no operation has been more generally discussed by the profession and the laity. No subject has been more persistently misrepresented by the lay press and, I regret to say, by the editorial writers of the medical press, and more thoroughly misunderstood than the results of this operation. Enough hips have now been operated on and enough time has now elapsed to give us a fairly accurate knowledge of the facts. These facts are what we wish to consider.

When the results from any operation are found to be quite different from the assertions of its advocates and the expectations of the profession it is likely to be unjustly condemned, and a humane means of relieving misery and suffering is likely to be lost to the world. Professor Lorenz, in expressing a wish that the death of a patient be kept out of the newspapers, once said to me: "They have raised me up far beyond my deserts; if they learn of this they will cast me down equally far below my deserts." So with this operation. It has been raised up, mainly by the newspapers, far beyond its deserts. Some day, I fear, it will be cast down far below its deserts, unless the facts be made known and the failures freely admitted by those who practice the operation and believe in its utility.

That my paper may not be misunderstood—that I may not be misunderstood—let me say at once that I practice this operation in every suitable case; that I believe it is the best operation for all operable cases, and the only operation to be seriously considered in all bilateral congenital dislocations at the hip. The fact that the number of perfect anatomic replacements is few—far below what has been claimed and hoped for—should no more condemn this method than the fact that no cases of true scoliosis are perfectly straightened should condemn the treatment of scoliosis. We did not condemn excision of the breast for cancer when the ultimate mortality was 90 per cent. The operations, in selected cases, were generally successful, but the patients almost invariably died sooner or later from recurrence of the disease. No more should we condemn the operation of bloodless replacement if it should chance to appear that the perfectly stable anatomic replacements do not amount to more than 10 per cent. to 20 per cent. of the cases operated on. It is just simply unfortunate that Lorenz has claimed, or that we have understood him to claim, 80 per cent. "good results," and more than 50 per cent. "perfect anatomic replacements." It is greatly to be regretted that the people have been led to expect perfect results, as the rule, for they are awaking to bitter disappointment, and unjustly condemn earnest and skillful opera-

* Read before the New York Academy of Medicine, March 3, 1904. A report of this meeting will be given next week

tors, if the operators chance to be honest men who admit the facts as to the results they obtain.

The results which I have found and set down in this paper will, I trust, be an encouragement to those operators who have doubted their own skill, and, I hope, may prove of use to some surgeons in convincing their patients that the results they have obtained are at least reasonably good.

In a paper dealing with the ultimate results of the bloodless reduction of congenital dislocation at the hip, I do not feel called on to discuss the development of this operation. While Ochsner credits all that is valuable in the operation to Lorenz, Davis would ascribe the credit to Paci of Pisa. To quote from Davis' paper—a paper that contains the most historic value and the fairest estimate of the situation of any that has appeared—a description of Paci's operation may be permitted. It is as follows:

> Flex the thigh well on the abdomen and press down on the knee to bring the head beneath the acetabulum; slightly abduct the femur; rotate outwards while increasing the abduction and bring the limb slowly into extension, stopping short of the point at which reluxation occurs. In attempting this method Lorenz, not being satisfied with his results, resorted (contrary to Paci's teachings) to extreme force. In 1895, the year following the congress at Rome, he advocated powerful screw extension, internal rotation, and fixation in abduction. Later in the same year he abandoned flexion at a right angle; forced abduction, supplemented at times by powerful manual extension (he abandoned instrumental extension) and fixation in a markedly abducted position in plaster, and allowed the patients to walk about instead of confining them to bed for four months, as did Paci. This he called his "belastungs," or functional weight bearing method, and Royal Whitman states that the utilising of the weight of the body to form a new socket is the essential and vital distinction from the forcible correction of Paci, with which it is often confounded. It is but just to Max Schede to state that he had been using for 15 years the weight of the body for this very purpose. Lorenz claims to be the originator of a new method of reposition, as well as of retention. He modified Paci's procedures, whether advantageously or not remains to be seen. His most marked departure was the use of great force. Finding he did not obtain immediately by Paci's manipulations the result he desired he proceeded to force its accomplishment. When the adductors prevented abduction he deliberately tore them by overstretching; when the head would not come down he put on screw extension or manual pulling by two or three assistants; when the head would not come forward he put the trochanter on Koenig's block to increase the effectiveness of the abduction and extension.
>
> Outside of the use of excessive violence, extension, increasing the abduction and tearing of the muscles, the method remains one of circumduction like Paci's. Of these four modifications, the excessive violence has already and is still giving such deplorable results that it is certain to be modified or abandoned. Lorenz himself has given up his screw extension. Extension in many cases is unnecessary, and need never be violent. Its place is not under chloroform narcosis, but when the patient is in bed by means of weights. I fail to see the advantage of tearing over tenotomy. The formation of hematomas, from the middle of the thigh to the umbilicus, sloughs and abscesses which have accompanied the practice do not commend it to me.
>
> In using Koenig's block beneath the trochanter it is a simple substitution for the hard roll of Pravaz and the edge of the table as used by Paci for the same purpose. In many cases the use of the hand alone suffices. Paci himself apparently used such forcible abduction and extension as to fracture the thigh in one case, and this shows that he abducted and extended as forcibly as was justifiable. For these reasons I can not see anything peculiar to the Lorenz method of reposition except violence, and if only a moderate and justifiable amount of force is used the bloodless reposition is that of Paci, and should be so called. The papers of Paci at Rome in 1894 were followed by Lorenz's book in 1895, and the method of forcible reposition was taken up and practiced more or less all over the world.

The cases I have to report have been divided into four groups: 1, Those observed by me in Chicago before my first operation of bloodless replacement; 2, those observed by me from the time of my first operation, July, 1897, to the advent of Lorenz, October, 1902; 3, those examined or operated on by Lorenz that I have notes on, or that I have been able to obtain reliable information about; 4, those operated on by me and all others examined by me since Oct. 12, 1902. These four periods may, perhaps, be characterised as the period of indifference, the period of interest, the period of delirium, and "the morning after," when things look so differently.

CASES IN FIRST PERIOD.

The first group comprises the cases from the first seen by me in Chicago on February 28, 1894, to my first bloodless replacement in July, 1897. There were 10 patients; 12 dislocated hips. All were girls. The ages were from 15 months to 11 years; 5 were right hips, 7 were left; the shortening was from one-half inch to 3½ inches. I have been able to trace only two of these cases and learn their present condition. Case 3 was a girl 5 years old, with left dorsal dislocation and three-fourths of an inch shortening when first examined by me Feb. 15, 1895. She afterward went to an advertising orthopedic institution, and for three years was treated by a traction hip splint on which she was allowed to walk. Now, Jan. 29, 1904, four years after the traction brace was discarded, she can, in standing, fully compensate for two inches actual shortening; she has free abduction and hyperextension, and walks with not a bad limp.

The other, Case 10, was a girl 7 years old, with dorsal dislocation of the left hip. She was referred to me by an eminent neurologist from an eastern city as a case of infantile paralysis. She had been treated for two years by electricity, and had been examined in consultation by an eminent orthopedic surgeon of the same city. The parents rejected my diagnosis, and even refused for two years to have an *x*-ray picture made to settle the matter. Then when the diagnosis was finally settled by a skiagram they refused operation until Professor Lorenz came. At that time the child was 13 years old, a large, strong girl. There was real shortening of about 2½ inches, and practical shortening from flexion and adduction of about 5 inches. Professor Lorenz, after examination, said replacement was not possible, nor was transposition, but advised tenotomy of the flexors and adductors and putting the limb in an improved position and retention for a long period in a leather splint, while massage and active and passive exercises were given to insure the maintenance of the new position. On advice of surgeons in Germany this operation was rejected.

The cases in detail are as follows:

GROUP 1.

No.	Sex.	Age.	Hip.	Shortening.	Examined.
1.	F.	2 yrs.	L.	¼ in.	Feb. 28, 1894.
2.	F.	18 mos.	R.		June 30, 1894.
3.	F.	5 yrs.	L.	¼ in.	Feb. 15, 1895.
4.	F.	6 yrs.	L.	1¼ in.	May 27, 1896.
5.	F.	11 yrs.	L.	2 in.	July 1, 1896.
6.	F.	8 yrs.	R.		April 29, 1896.
7.	F.	10 yrs.	R.	2½ in.	Sept. 3, 1896.
8.	F.	4 yrs.	R.	1 in.	Nov. 23, 1896.
9.	F.	3 yrs.	R.	¾ in.	April 27, 1894
10.	F.	7 yrs.	L.	1½ in.	

OPINIONS OF VARIOUS OPERATORS.

The second period runs from my first bloodless replacement in July, 1897, to the first operation in this country

by Prof. Adolph Lorenz of Vienna, on Oct. 12, 1902, and comprises 40 patients with 51 dislocated hips. During this time, in fact, at about the middle of this period, in November, 1900, I became sufficiently interested in the subject, the reduction of congenital dislocations at the hip, to write to many of the eminent orthopedic surgeons of this country, asking for their experience and opinions; and later I visited New York and Boston. Some of the replies are interesting reading.

Dr. Harry M. Sherman, San Francisco, wrote on Dec. 11, 1900:

I have had only one of the bloodless plan that "stayed put." I believe there were about a dozen that were "put." With that case I am satisfied. . . . I do no more bloodless operations.

Dr. A. M. Phelps, New York, wrote on Nov. 19, 1900, that he had operated on several cases, but he did not say whether or not it was by the bloodless method. However, when I arrived in New York he had no cases to show me. They were all in the country or had been lost sight of.

Dr. E. H. Bradford, Boston, wrote on Nov. 25, 1900:

All my cases of congenital hip reduced bloodlessly [he had reported on 44 hips in 34 patients[1]] have relapsed, except one about which I am doubtful. It is now two years since the operation, and I have an *x*-ray that is being developed. It seems to me that the hip has slipped since the previous examination three months ago.

I had an opportunity to examine the *x*-ray negative a few days later, and the replacement appeared to me to be a perfect one. Dr. Bradford had just returned from the International Medical Congress at Paris, and in the letter from which the foregoing is quoted, he further says:

At the Paris congress an animated discussion on the bloodless and the operative measures was conducted by Lorenz and Hoffa. Each had cases which they operated on before the congress. The bloodless method, as carried on by Lorenz, has certain successful cases, but according to his own statement, as well as those of other surgeons, there is a percentage of relapse. According to Hoffa it is a very large percentage.

Drs. Shaffer, Gibney, Sayre and Hibbs of New York had had no cases of bloodless replacement in November, 1900, and Dr. Townsend of New York had only two, recently operated on.

Dr. H. Augustus Wilson, Philadelphia, had no successful cases, and knew of none in Philadelphia, on Nov. 17, 1900.

At the meeting of the American Orthopedic Association in New York, May 31 to June 2, 1899, Dr. Royal Whitman reported 32 operations on 23 hips in 21 patients. Three were cured; 5 were still under treatment; 1 was a failure; 1 could not be traced; 1 discontinued treatment; 8 were "transposed"; and 2 had had the open operation performed. It is not stated whether these two cases on which the open operation was performed were transpositions, relapses or failures by the bloodless method. It should be noted that only one of these 21 patients had both hips dislocated, and this case was still under treatment at the time of the report. It should also be remembered that it is more difficult to obtain perfect results in bilateral than in unilateral cases. Dr. Whitman mentions incidentally two cases operated on by Dr. Gibney, but in November, 1900, Dr. Gibney stated to me verbally that he had had no successful cases by the bloodless method.

In November, 1900, Dr. Whitman was able to give me the names of three other cured cases; two were unilateral and one bilateral. I looked up the bilateral case and found, in a child operated on when about 18 months old, a perfect anatomic replacement on one side and an anterior transposition, or what Lorenz calls "a good result," on the other side. Whitman's first operation was in July, 1896. He had operated on 22 hips by June, 1899, with three perfect replacements. From that time to November, 1900, I do not know how many he had operated on, but he had added three more cases to his list of perfect results. This you will realize, as I go on with my report, is a very creditable showing.

1. Boston Med. and Surg. Jour., Oct. 25, 1900.

EXPLANATION OF TERMS USED.

Before considering the cases of this group and figuring the results, it may be well to consider the meaning of the terms used to characterize the results. By a failure, I mean that the operator has failed to apparently replace the femoral head in the acetabulum; and that he has also failed to effect anterior transposition. By "apparent replacement" I mean the condition which is usually demonstrated as a perfect replacement by the operator; where the sensation, and often the sound of the femoral head passing over the rim and into the acetabulum is present, together with shortening of the hamstring muscles showing that the head has descended from its original site and is resting more or less securely at a lower point. Lorenz regarded this symptom of shortening of the hamstrings as diagnostic of replacement, but Wilson of Philadelphia has demonstrated, postmortem, that this symptom may be present when the femoral head simply rests on the contracted opening of the cotyloid ring, and is in no sense in the acetabulum. This ought to have been obvious to all of us, but was not, before Wilson made his demonstration, for we have all observed, after the replacement has apparently been made and the thigh is in right-angled abduction and flexion, that, if we bring the limb downward toward its fellow, reducing the abduction and flexion, the femoral head sooner or later will slip from its resting place and pass up to its original site. If it slipped from its resting place easily we have said that the acetabulum was shallow; that it would be difficult to hold the replacement; that a perfect anatomic replacement might not be the result, and that we might only succeed in getting a good result. And by "a good result" we mean an anterior transposition. If, on the other hand, we found it possible to reduce the abduction to within 10 to 20 degrees of the normal, we have said that the acetabulum appeared to be a good one, and that the result would most surely be a perfect anatomic replacement. If the femoral head never really enters the acetabulum at the time of the operation, and at best only rests more or less deeply in the opening of the narrowed cotyloid ring, the phenomenon of slipping out more or less easily, or with more or less difficulty, but always slipping out when the limb is sufficiently adducted, or rather when the extreme abduction has been sufficiently reduced, is obvious. All the skiagrams I have seen taken immediately after the replacement have shown the femoral head some distance away from the bottom of the acetabulum, and it appears to me very doubtful if a perfect anatomic replacement is ever accomplished at the time of the operation. I trust, then, that you will permit me the use of the term "apparent replacement."

Of the cases apparently replaced at the time of the operation, a certain number ultimately result in perfect anatomic replacement. This has been questioned, but it is a proved fact—proved by Paci at the International

Medical Congress in Rome in 1894, where he presented the pathologic specimen of a case operated on by Notta, and proven also by the case reported by Edward Ochsner.[2] A considerable number of cases ultimately turn out "good results," that is to say, anterior transpositions, the femoral head lying to the front of the acetabulum, sometimes very near and sometimes far from the socket. If the head lies near the socket, and if it remains secure in its new position all of the characteristic deformity of congenital dislocation is effaced, namely, the shortening, the insecure step, the lordosis, the flexion and the adduction; it is a good functional result; only full inward rotation and full flexion are lacking. But if the anterior transposition is extreme, and unfortunately in some cases where it is not extreme, the femoral head gradually passes upward until it may be said to have relapsed into a supracotyloid dislocation, with shortening, outward rotation and insecurity. And, finally, some of the cases of anterior transposition suffer complete relapse by the femoral head passing upward and backward into its former position on the dorsum of the ilium.

By a supracotyloid displacement I mean a result where the limb is short, the greater trochanter displaced upward, and the femoral head can be felt above the acetabulum, anteriorly when the limb is rotated outward and posteriorly when the limb is rotated inward.

By an "improved position" we mean that the limb has been abducted, and thereby apparently lengthened, and the femoral head perhaps advanced somewhat, and the deformity due to the flexion, adduction and false shortening has been corrected, more or less completely, and that patient stands and walks in an improved position.

By a "perfect replacement" is meant a case where the femoral head, on palpation, can be felt no more distinctly in front, at the back, or above the acetabulum than in the normal hip; where there is no shortening, or not more than one-fourth of an inch; where the skiagram shows the femoral head as deeply within the acetabulum as normal, and where a final observation has been made at least six months after the removal of the splint.

Having explained the meaning of the terms used in discussing the results, it may be proper to speak briefly of the accidents that may befall one in making this operation. They are: Paralysis from overstretching; fracture of the neck of the femur; fracture of the shaft of the femur; fracture of the ramus of the pubes; fracture of the ischium; tearing of the perineum; rupture of the femoral artery; gangrene from cutting off the circulation through stretching the femoral vessels. There may be others, but these are sufficient for the surgeon who has experienced one or more of them.

SUMMARY OF CASES IN SECOND GROUP.

In the second group there were 40 patients, with 51 dislocated hips, 20 right hips and 31 left; 36 were girls and 4 were boys. Their ages were from 18 months to 13 years. The shortening was from one-half inch to 4½ inches.

Of these 51 dislocated hips, 24 were operated on, 12 rejected and 15 refused operation. Of the 24 operated on, there were 5 failures, 5 relapses, 1 supracotyloid displacement, 2 anterior transpositions, 2 perfect replacements and 9 apparent replacements. It is very likely that a large proportion of these 9 apparent replacements would be found to be either anterior transpositions or supracotyloid displacements could they be traced and radiographed.

2. Annals of Surgery, August, 1902.

Of the 5 relapses and 5 failures, 1 was subjected to Hoffa's cutting operation, and of the remaining 9, Lorenz operated on 5, with what result you shall see later. All the cases were dorsal dislocations except one, which was upward and forward.

In detail the cases are as follows:

GROUP 2.

CASE 11.—Female, aged 10 years; left hip; shortening 2 inches. Operated on July 1897. Last examined Aug. 29, 1898. Apparently perfect result. This was my first operation and was made with considerable timidity. I was satisfied with getting the impulse of the head slipping into the acetabulum, and did not sufficiently stretch the adductor muscles. The case relapsed and was replaced in December, 1897, and again in February, 1898. On removal of the splint, Aug. 29, 1898, the replacement was apparently perfect. I am unable to trace the case and do not know the ultimate result.

CASE 12.—Female, age 4 years; right hip; shortening 1 inch. Operated on Sept. 28, 1897. The plaster splint was worn nine months. A year later, June 14, 1899, the hip was apparently in place; there was a ½-inch shortening, and the patient walked without a limp. Three years later Dr. T. A. Davis presented the case to Professor Lorenz, and he operated. Some

Fig. 1.—Case 12. Operated on by Ridlon. Relapse after four months. Same as Case 21. Operated on by Lorenz. Skiagram after relapse and a year before Lorenz operated. See Figure 2.

eight months later Dr. Davis removed the splint put on by Lorenz, and the femoral head at once slipped from its resting place in or near the acetabulum. Dr. Davis replaced the head and put on another plaster splint. The present condition is unknown; the parents refuse to permit an examination or a skiagram. The child walks with a limp and probably has a supracotyloid dislocation.

CASE 13.—Female, age 3 years; left hip; shortening 1¼ inches. Refused treatment.

CASE 14.—Female, age 8 years; left hip; shortening 1½ inches. Operated on Feb. 9, 1898. Hip apparently in place when removed to Cook County Hospital, June 3, 1898, for diphtheria. Can not be traced.

CASE 15.—Female, age 6 years; left hip; shortening 1 inch. refused operation.

CASE 16.—Female; age 3 years; left hip; shortening ⅝ of an inch. Operated on March 21, 1898. At the end of 13 months, when she passed from my care, the head was apparently in place; there was ¼ inch shortening, and she walked with scarcely a limp. During the following winter she was treated by an osteopath for three months. I was permitted to examine the child 19 months after she passed from my care. There was a ⅝ inch shortening and the head could be felt above the acetabulum. The parents, trusting to the assurances of the osteopath that the hip was in place, refused to have a skiagram made and refused to believe that relapse had occurred. Two years later Professor Lorenz operated. The re-

placement was effected with ease for a seven-year-old child, as easily as most primary replacements in children of four. The acetabulum appeared to be good; and a perfect replacement was prognosticated as the ultimate result. When the plaster splint was removed some eight months later Professor Lorenz told the child's father that the head was in anterior transposition. This case illustrates the difficulty of prognosticating the final result at the time of operation.

CASE 17.—Female, 2 years; left hip; shortening ¾ of an inch. Operated on Oct. 20, 1899. Apparently perfect thirteen months later. Can not be traced.

CASE 18.—Female, 20 months; righ hip; shortening ¾ of an inch. Operated on Oct. 18, 1899. Relapse. (Fig. 1.) The child's mother has bilateral congenital dislocation of the hips. Oct. 17, 1902, Lorenz operated. (Fig. 2.) When the plaster was removed in May, 1903, the femoral head was found in anterior transposition. Since then it has become supracotyloid, and there is ½ an inch shortening.

CASE 19.—Female; age 3 years; both hips; shortening 1 inch. Refused operation.

CASE 20.—Male, age 6 years; left hip; shortening 1¾ inches. Operated on March 31, 1899. Failure. Later I assisted Dr. L. L. McArthur in making Hoffa's cutting opera-

Fig. 2.—Case 18 and 91. Operated on by Lorenz. Apparent replacement. Found anterior on removal of splint.

tion. The wound became infected, and the ultimate result was a stiff hip, with adduction deformity and practical shortening as great as the actual shortening had been before the operation.

CASE 21.—Female, age 12 years; both hips; 2½ inches. Rejected.

CASE 22.—Female, age 8 years; left hip; shortening 1¾ inches. Two operations by me; both failures. Dr. Christian Fenger had previously made several unsuccessful attempts. Nov. 26, 1902, when the child was 11 years old, after 4 weeks preliminary weight and pulley traction in bed, Lorenz operated, but failed to replace and failed to transpose. The adductors were freely torn, and the limb put up in the abducted position. At the end of 8 months the mother removed the plaster splint, and since then the child has had no treatment.

Jan. 18, 1904, there was 2¼ inches actual shortening, but only about ½ an inch practical shortening, so free is the abduction and so good the compensation by dropping the hip. She walks on the ball of her foot without high shoe, and with very little limp.

CASE 23.—Female, age 5 years; both hips; shortening 1¼ inches. Refused operation.

CASE 24.—Female; age 12 years; both hips; shortening 2½ inches. Rejected.

CASE 25.—Female, age 6 years; left hip; shortening ½ an inch. Operated on Oct. 2, 1899. Reported perfect six months later by Dr. F. C. Test. Can not be traced.

CASE 26.—Female, age 6 years; right hip; shortening ¾ of an inch. Operated on Oct. 11, 1899. On July 12, 1900, the femoral head was in anterior transposition.

CASE 27.—Female, age 6 years; left hip; shortening 1¾ inches. Operated on Nov. 22, 1899. Failure.

CASE 28.—Female, age 9 years; left hip; shortening 1½ inches. Operated on Dec. 13, 1899. May 25, 1900, apparently perfect. Jan. 22, 1904, there was found to be supracotyloid dislocation, with 1½ inches shortening. She walks on the ball of her foot, without a high shoe, with little limp, and can fully compensate when standing. Figure 3 shows an acetabulum too shallow to be of any use.

CASE 29.—Female, age 7 years; left hip; shortening 1¾ inches. Rejected.

CASE 30.—Female, age 4 years; left hip; shortening 1 inch. Refused operation. No treatment since.

CASE 31.—Male, age 3 years; both hips; shortening 1 inch. Operated on April 30, 1900. Right apparently perfect; left relapsed. Has not been seen recently; present condition unknown.

CASE 32.—Female, age 3 years; right hip; shortening ¾ of an inch. Refused operation.

CASE 33.—Female, age 4 years; both hips; shortening 1¾ inches. Operated on Dec. 30, 1900. Right hip relapsed during the second month while in the plaster splint, and treatment of

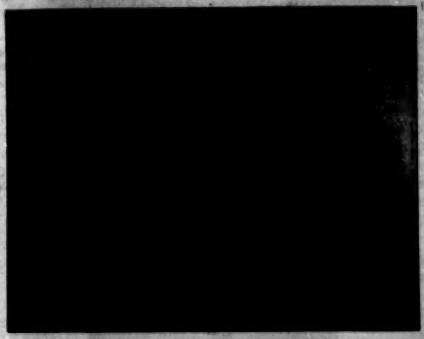

Fig. 3.—Case 32. Operated on by Ridlon. Hip apparently infer six months after operation, on removal of plaster splint. Skiagram Jan. 22, 1904, 3½ years after operation, shows a "saucer-shaped" acetabulum and a supracotyloid displacement.

this hip was abandoned until a good result should be had on the left side. The plaster splint was removed from the left hip at the end of seven months, and replacement was apparently perfect. During the following three months the femoral head came forward far enough to be felt in the groin. Dr. Fenger was of the opinion that it was an anterior transposition, and such I have reported it. The child walked on this limb for eighteen months without any shortening resulting, and when Professor Lorenz operated on the right hip on Oct. 12, 1902, he examined the left hip and said: "That hip is good enough for any one." He did not say whether he considered it a perfect replacement or an anterior transposition.

When Professor Lorenz removed the splint from the hip he had operated on (the right) the limb was found to be shorter than the one I had operated on, but the head appeared to be in place. After about three weeks of daily massage and manipulation by Professor Lorenz an anesthetic was again given and the limb again stretched and manipulated, and again put in a plaster splint. The result has been stated by Professor Lorenz to be an anterior transposition, or "apposition," less good than the result in Case 16.

CASE 34.—Female, age 4 years; left hip; shortening 1 inch. Refused operation.

CASE 35.—Female, age 12 years; both hips; 3½ inches. Rejected.

CASE 36.—Female, age 4 years; left hip; shortening ¾ of an inch. Upward and forward dislocation (Fig. 4). Oper-

ated on March 29, 1901. Relapsed. Again operated on Nov. 22, 1901. Apparently perfect replacement.

CASE 37.—Male, age 2 years; left hip; shortening ⅝ of an inch. Operated on May 17, 1901. Aug. 16, 1901, apparently perfect. Can not be traced.

CASE 38.—Female; age 8 years; right hip; shortening 2 inches. Rejected.

Fig. 4.—Case 36. Dislocation upward and forward. Before operation. Two operations were made. Perfect replacement when last examined 3 months after removal of splint.

Fig. 5.—Case 39. A rejected case.

CASE 39.—Female, age 12 years; both hips; shortening 4½ inches. Rejected. Afterward rejected by Lorenz. Figure 5 illustrates the kind of case that is impossible to treat.

CASE 40.—Female, age 18 months; right hip; shortening 1 inch. Refused operation.

CASE 41.—Female, age 6 years; both hips; shortening 1¾ inches. Refused operation. Has had no treatment since.

CASE 42.—Female, age 13 years; left hip; shortening 3 inches. Rejected.

CASE 43.—Female, age 2 years; left hip; shortening ½ an inch. Operated on June 30, 1902. In July, 1903, the result was perfect, and child walked without a limp.

CASE 44.—Female, age 2 years; both hips; shortening 1 inch. Operated on Sept. 21, 1902, and put up with knees considerably posterior to the transverse mid-plane of the body. The child was very fat and two previous replacements had relapsed. On removal of the splint at the end of eight months the femoral heads were distinctly anterior. The knees were brought forward until the heads appeared to rest in the cotyloid rings and plaster splint was again put on for two months. Since then there has been such massage and exercises as the mother could give. When last seen the replacement appeared to be perfect, but I have no skiagram and I think it more than likely that supracotyloid displacement will result.

CASE 45.—Male, age 7 years; right hip; shortening 1 inch. Refused operation.

CASE 46.—Female, age 2 years; right hip; shortening ⅝ of an inch. Refused operation.

CASE 47.—Female, age 4 years; left hip; shortening 1¼ inches. Operated on Sept. 20, 1902. Perfect replacement.

CASE 48.—Female, age 7 years; both hips; shortening 1½ inches. Two operations; both failures. Afterward operated on by Lorenz.

CASE 49.—Female, age 12 years; left hip; shortening 2½ inches. Rejected.

CASE 50.—Female, age 3 years; right hip; shortening 1 inch. Refused treatment. Afterward operated on by Lorenz.

(To be continued.)

THE COMPOSITION OF SOME SO-CALLED SYNTHETICS AND "ETHICAL" NOSTRUMS.*

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One fine morning, some weeks ago, a young lady, an actress by profession, came to consult me about an obstinate headache. "I have used everything you can think of," she said. "I have used antikamnia, Kohler's headache powders, ———'s migraine tablets, orangeine, Hegeman's headache wafers and a lot of other things. At first they used to relieve me, but now they don't do me any good." The self-drugging young woman enumerated five different articles which she had used; different articles in name, but identically the same so far as composition is concerned. Everyone of those articles consists of acetanilid, sodium bicarbonate and a little caffein. Finding a malarial history, I prescribed quinin and ergotin, and her headaches promptly vanished.

About two weeks later a young practitioner approached me at the close of a medical meeting with the following words: "Doctor, I wish you would recommend me something good for dysmenorrhea. I have an obstinate case for which I tried everything you can think of." "What did you give her?" I asked. "Oh, I gave her antikamnia, phenalgin, salfene, phenobromate and all the various combinations recommended for dysmenorrhea. They have a slight effect, but only temporary." Here we have a physician, a man who paid out a thousand dollars in tuition fees in a medical college, who does exactly the same thing as the ignorant young woman; that is, he prescribes for his patients things of the composition of which he knows absolutely noth-

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ing. All the nostrums he enumerated contain acetanilid as their chief and principal ingredient, and he did not know it! A professional man, and he did not care to make the least investigation into the nature of the drugs he prescribed! Had he done so, he would have spared himself the trouble of prescribing the same drug over and over again under a different name, and his patient's sufferings might have been alleviated by more rational treatment. How can we blame the laity for self-drugging and for swallowing mixtures of which they know nothing, when regular physicians are doing the same thing right along. The above is by way of preface, and now to the subject of the paper.

Something must be done to stop the avalanche of nostrums which threaten to overwhelm and bury the general practitioner, which put barnacles on the wheels of therapeutic progress, and which throw confusion into the minds of those who have not made pharmacognosy and materia medica a special study, and even into the minds of those who have. No one who has not given the subject especial attention can imagine what impudent mendacity, what incredibly absurd claims, what impossible statements are indulged in by those nostrum manufacturers who have made the physician their special prey. And not only this; downright dishonesty is practiced in taking an old well-known compound, christening it with a new name and offering it to the physicians as a new discovery, as a new synthetic with wonderful properties, as one possessing all the virtues of the old compound with all the drawbacks eliminated. If we take into consideration the difference in the education of the medical profession and of the laity, and compare the statements of the "ethical nostrum" manufacturer with those of the regular quack patent-medicine man, we will find that the ones are not in the least less extravagant than the others. It would be impossible to enumerate and to discuss all the fakes and humbugs that are foisted on the attention of the medical profession. I must, therefore, be satisfied with giving a few illustrative examples. The examples are not by any means unique. They are typical of numerous other cases.

Some three years ago a preparation appeared on the market heralded as a wonderful new antipyretic alkaloid, non-depressant, a specific in typhoid fever, etc. Numerous cases were reported by a certain class of practitioners testifying to its value in various conditions. An impossible formula was appended, and it was launched as one of the great discoveries of the twentieth century. One would hardly believe it, but it is a fact which can be demonstrated before the eyes of everyone, that this wonderful new discovery is nothing but impure acetphenetidin. I was so astonished when I made the discovery that I thought I would apply to some authority for confirmation of my findings. I wrote to Prof. Virgil Coblentz of the New York College of Pharmacy, and he answered me that I was perfectly correct; that it was nothing more nor less than impure acet-para-phenetidin, that is, phenacetin. He added: "Possibly traces of salicylic acid have been added to the product from time to time, for obvious reasons, yet this does not alter the fact that we have before us in this preparation an impure phenacetin. This is a positive assertion, based on the results of a number of examinations." The same company puts up a preparation which is asserted to be bismuth oxyiodid methylene digallate. According to analysis, it is merely bismuth gallate, with a small quantity of free gallic acid; no iodin could be traced in the examined specimen. Another specialty, greatly boosted as a wonderful remedy in uric-acid poisoning, is claimed to be acetyl methylene di-salicylic acid. According to analysis, it is simply an impure methylene salicylic acid, which can be easily produced from salicylic acid by means of formaldehyd and muriatic acid. The presence of an acetyl group could not be established in the examined sample, either by heating with water or with alkalies, or with concentrated sulphuric acid. On heating a substance with concentrated sulphuric acid and alcohol, if acetyl is present, the odor of acetic ether is noticed, while with this preparation, there is not a trace of acetic ether observed.

Hemaboloids was also introduced with a loud beating of drums. Beautifully executed charts were given, showing the various kinds of blood corpuscles, the great increase in the number of erythrocytes, etc. The preparation was asserted to be "a palatable fluid food, partially digested and made aseptic and more assimilable by treatment with nuclein, rich in iron and phosphorus-producing elements," and it is said to consist of "vegetable nucleoalbumin (Nature's supply source of iron and phosphorus for the human system), reinforced by bone marrow extract and beef peptones." What are the facts? A careful analysis has demonstrated the total absence of nuclein or bone marrow; and, further, that the preparation is nothing more nor less than an alkaline 1 per cent. solution of iron peptonate in a vehicle of alcohol, glycerin and water, flavored with spirit of orange. The amount of alcohol it contains is large, namely, 16 per cent., stronger than any ordinary wine. According to Professor Harrington of Harvard, the maximum *daily* dose recommended yields about *one-fourth of an ounce* of nutriment, and the alcoholic equivalent of about an ounce and a half of whisky.

While I am on this subject of hemaboloids, I might touch briefly on prepared liquid foods in general. Most of them are a snare and a delusion, and I have no doubt that we frequently starve our patients on those "concentrated, predigested foods." As an example, I will take the most popular, because the oldest of the liquid foods, namely, liquid peptonoids. This is said to contain "the albuminoid principles of beef and milk and wheat," and asserted to produce immediate and pronounced effects in cases of feeble digestion and wasting diseases; dose, for an adult, one or two teaspoonfuls, three to six times daily; children in proportion.

The maximum amount recommended for an adult will yield less than an ounce of nutriment, and the alcoholic equivalent of three and one-half ounces of whisky per day. Analysis shows 23.03 per cent. by volume of alcohol, 14.91 per cent. of total solids, and 0.17 per cent. of mineral matter.

The above examples illustrate the extravagant and false assertions made by certain manufacturers regarding the composition of their products.

There is another class of products about the composition of which no assertions are made. Nothing is stated about the chemical composition, because the products being common mixtures requiring no brains, skill or knowledge, any false assertions would render the proprietors ridiculous. Therefore they say nothing about the composition of their products; they simply tell you: prescribe our goods; they produce wonderful results; you need not know what they consist of, we will look out for that. All you want to do is to order in original packages and use according to directions. And, sad

to say, there are numerous physicians who do just as they are told. To give the composition of a few of these preparations might not be without interest:

Antikamnia: This nostrum has been shown hundreds of times to consist of acetanilid, sodium bicarbonate and caffein. Its cost is about 3 cents per ounce; it is sold at $1 per ounce; The poor druggist and the public pay, and the manufacturers make millions.

Salfene: Composition, acetanilid and sodium bicarbonate.

Phenolid: Acetanilid and sodium salicylate.

Febralgen: Acetanilid and sodium bicarbonate.

Phenobromate: Acetanilid and potassium bromid.

Phenalgin: Acetanilid, ammonium carbonate, sodium bicarbonate, caffein.

Phenamid: Acetanilid and sodium bicarbonate.

Note that every one of the above wonderful discoveries contains acetanilid. It is a regular bonanza for those manufacturers. Acetanilid costs 25 cents a pound, sodium bicarbonate 3 cents. With the little caffein the mixture costs about 30 cents a pound, and it sells for $16.00!

And now I want to touch on another great nuisance, which brings so much confusion into the poor physician's mind that he simply "don't know what is what," and even the specialist in materia medica often does not know where he is at. I refer to the custom of giving fancy names to well-known, not even patented chemical compounds, and to the questionable practice of giving several different names to the same compound. I will give a few examples, just as they come to my mind:

"Hydrargotin" is a fancy name for mercury tannate.

"Dymal" is didymium salicylate.

"Montanin" is zinc sulphite.

"Chrysolein" is sodium fluorid. "Remarcol" is the same thing.

"Techiol" is silver fluorid.

"Horit" or "Gorit" is calcium peroxid.

"Calcinol" is calcium iodate.

"Biogen" is magnesium peroxid.

"Musol," is a fake diabetic remedy, which is nothing but salol.

"Anodynone" is a trade name for ethyl chlorid.

"Antimorphin" is a solution of sodium phosphate.

"Katharol," "Lason" and "Oxydol" are fancy names for a solution of peroxid of hydrogen.

"Intestin" is bismuth-naphthalin benzoate.

"Parietin" is chrysophanic acid.

"Rachitol" is an imbecile name for the suprarenal gland in tablet form.

And if a new preparation appears on the market, the process of which is not or can not be patented, there are sure to come up several brands of it under different names. It is enough to drive one to insanity to try to remember them all. Hexamethylene-tetramine, one of the few really valuable remedies introduced during the last decade, was first brought to the notice of the medical profession under the name "formin." It was soon taken up by Nicolaier, to whom belongs the credit of popularizing it under the name urotropin. After that we got the names "cystogen," "cystamine," "ammonioformaldehyd," etc., etc., all one and the same thing.

Di-sodium methyl arsenate, a preparation similar to sodium cacodylate, except that the latter is a di-methyl arsenate, is known under the three euphonious and instructive names: "arrhenal," "stenosine" and "neoarsyeodyle."

Iron cacodylate has three aliases: "atarsyle," "ferricodyle" and "marsyle"; thymol carbonate is known under two names: "thyratol" and "thymotal"; magnesium dioxid has two aliases: "biogen" and "hopogan"; airol is also known as "airoform" and "airogen."

What is the remedy? The remedy for this, as for most other evils, is education. It is a false and pernicious theory that error should be left alone; that it will die out by itself. It may in time, but I am sure that error and fraud unattacked will live much longer and thrive much better and have many more followers than if exposed frequently and attacked boldly and unitedly. We need an active, persistent propaganda, a twofold propaganda—propaganda among the laity and propaganda among physicians. The Association should appoint a committee of two or three hundred members, whose duty it should be to write frequently to the daily press on the evil of self-drugging, to enlighten them as to the composition of most of the widely advertised nostrums. It would be still better if every ethical physician constituted himself a committee of one to pursue this work. Show the people that in taking "Peruna," "Hostetter's Stomach Bitters," etc., they are merely imbibing large quantities of whisky. Show them what quack-medicines contain morphin and other narcotics, and the sale of those remedies will diminish materially.

But the physician is just as much in need of missionary work, in his line, as the public is. Let us educate the physician to demand the composition of everything he prescribes. The manufacturer will have to give it, because without the physician he might as well go out of business. And if we are given the formula, let those of us who are competent, examine the product once in a while to see whether it is true to the formula or not. And woe to the manufacturer who gives a false formula or makes false assertions. All his other goods would be ostracized forever. Let the true composition of each remedial preparation be insisted on as a *sine qua non* before prescribing, let our journals print occasionally contributions about the various wonderful discoveries offered to the profession, and all such products as "antikamnia," "thialion," "respiton," "neurilla," "Dad's quinin pills," "emissine," "appendicine," "gynecine," "manola," "sanmetto," "scthol," "seng," "chiomia," "chaparine," "zarcol," "labordine," etc., will disappear from the face of the earth, and will cease to disgrace the pages of our medical journals. Having mentioned medical journals, I can not conclude without saying a few words on the subject of medical advertising.

This is a subject which must be discussed without reserve, and it is a subject which will not be settled until it is settled right. To say that the reading pages have nothing to do with the advertising pages, is sheer hypocrisy; no matter how we may try to get away from it, the fact remains that when we advertise a preparation we give it a quasi indorsement. And even if we don't give it an indorsement, we induce the physicians to prescribe it, we aid in its sale, we encourage charlatanism and fraud, we confuse therapeutics; in short, we aid indirectly in humbuggery. I am not a crank. I am not opposed to new remedies of proved merit, but I assert that the line must be drawn somewhere, and it must be drawn closer than it is at present. We rail at the daily press for admitting filthy medical advertisements and demand that they discontinue the practice. But many of the advertisements in the medical journals are of no better character, and we should certainly give our own journals a thorough cleansing before pointing out filth in the daily press. I am not speaking of such journals as the *Medical Brief*. The object of such journals is

filthy lucre, and no filth is too filthy for them. But how respectable journals can admit such articles as emissine, sanmetto, California Fig Syrup, Robert-Hawley's lymph compound, manola, neurilla, seng, chionia, ecthol, antikamnia, Dad's quinin pills, etc., is beyond my comprehension. To preach in the editorial and reading pages therapeutic rationalism, care and discrimination in prescribing, and then nullify the teachings by presenting in the advertising pages a lot of nondescripts of unknown composition, is certainly the acme of absurdity and inconsistency. It is not a whit less inconsistent than the attitude of the *New York Journal*, which prints splendid editorials against the whisky evil and its life-destroying property on one page, and on the next page presents to its readers an array of testimonials of the wonderful life-prolonging virtues of Duffy's malt whisky. No, something must be done in the matter. The advertising pages of ethical medical journals must be made clean, to correspond more or less, at least, with the tone of the reading pages.

In conclusion: Do not misunderstand me; I do not attack all patent or proprietary preparations. Not at all. Our first duty is to our patients. If a patented preparation will do our patients more good than an official one, let us prescribe it by all means regardless of the fact that the manufacturers are making a good profit out of it. I am simply pleading for discrimination. The high-class manufacturers of true synthetics, of products in whose preparation real chemical skill and knowledge are required, or of elegant pharmaceutical preparations, about the composition of which there is no mystery and about which no extravagant assertions are made, who subject their remedies to clinical tests at the hands of competent physicians before they launch them into the market, should be supported and encouraged; the fakers who mix two or three well-known ingredients, christen them with some fancy name and make extravagant assertions for them, should be boldly and fearlessly exposed.

DISCUSSION.

DR. GEORGE F. BUTLER, Alma, Mich.—I stated at Columbus that we ourselves are to blame for all this. The average physician to-day learns his therapeutics from pharmaceutic houses. The therapeutics of to-day are not equal to the therapeutics of our grandfathers. When the subject of therapeutics is better taught in our colleges and when more time is devoted to it, possibly the physician of the future will be able to prescribe medicines about which he knows something. Materia medica is not taught at all now in some colleges, and is considered of minor importance in others. The student has been taught to look into the microscope for bugs, giving but very little if any attention to the treatment of sick people, and when he enters practice some fellow comes along and says such and such a proprietary preparation is good for so and so, and he prescribes it. I do not know how we are to prevent it either unless students are educated differently. It is really a question whether a medical journal is responsible for its advertisements any more than is *Harper's Magazine* or the *Chicago Tribune*, or any other periodical.

DR. CASWELL A. MAYO, New York City—An improvement in one weak feature in medical education, from the standpoint of the pharmacist, would go far toward solving the problem. That is the practice in hospitals of ordering by numbers. In the average hospital, with the view of economizing the time of the pharmacist, nearly all the internes get into the habit of prescribing certain routine preparations by number, without knowing fully what they are giving in certain conditions. They thus pave the way toward a purely empirical method of treatment. This sort of thing should be avoided. In one college each prescription is written out in full, and it is dispensed separately by the pharmacist; thus the medical students get practice in actually writing prescriptions and the pharmacy students get practice in filling them. It is to be hoped that this individual method of presenting will be more generally adopted.

DR. C. S. CHAMBERLIN, Cincinnati—Confirming the statements of Dr. Robinson regarding one preparation referred to, I will say that about three years ago Prof. H. M. Gordin analyzed this substance and reported that he found it to be impure phenacetin and I believe he wrote to the editor of one of our most prominent journals calling attention to the fact that they were publishing an advertisement of a fraudulent article, and I myself brought to their notice, through their advertising manager, this fact, but the advertisement still appears in the journal in question. With regard to the proprietary preparations with curious names, the physician is probably responsible for all of them. Dr. Butler admits that he has used every proprietary preparation of iron he ever saw. A few years ago I took charge of the advertising department of one of our largest manufacturing houses, and as I was informed that certain of our leading journals had adopted a rule by which they insisted on having the exact composition of every preparation advertised, I published the formula of each specialty which we advertised in their pages, but I soon found that I was the only one who did so. The manufacturing pharmacist simply supplies the demand of the physician.

DR. W. W. TOMPKINS, Charleston, W. Va.—I think the very heads of the profession are largely responsible for the introduction of these preparations. I know very well that when these preparations are brought to me I look over the names of men who have used them, and if a certain list does not contain the name of some one man of particular standing I put the preparation aside, but, on the other hand, if there are endorsements by good men who are recognized as teachers then I am in the habit of giving the preparation a certain degree of confidence. In a certain preparation I noticed that a man had substituted antipyrin for acetanilid. I believe Dr. Robinson stated in his paper that acetanilid is worth 18c or 20c a pound, and I believe phenacetin is worth four or five times that amount. We should all strive to make some original observation as to the effects of medicines, and when remedies are not producing the effect they are asserted to produce, cast them aside. I believe it to be the province of each conscientious physician to endeavor to reduce the number of remedies in the materia medica, and not add thereto. How many of these new remedies are remembered a year after their announcement? Let us do all we can to perfect and simplify therapeutics.

DR. J. A. BRONCK, New Orleans—I am inclined to agree with Dr. Butler that the fault begins in the medical college, and that we should teach the student to study the writing of prescriptions, and should teach him materia medica. Even in the best colleges there seems to be a tendency to ignore materia medica.

DR. J. S. RAWLINS, Danceyville, Tenn.—A fault which has not been attended to is the injustice done the licensed pharmacist by prescribing these compounds. I am not a pharmacist, but a physician. The advertisers are using us to introduce their compounds, and very soon they will abandon both physician and pharmacist and deal directly with the patient and advertise through the secular press, and the pharmacist and the physician who give these compounds will be degraded to the position of pedlers of secret or patent nostrums.

DR. B. C. KEISTER, Roanoke, Va.—We should make a distinction between secret nostrums and proprietary articles whose formula is known, and we may prescribe the latter, but secret nostrums should not be kept in the drug stores, because no intelligent physician will prescribe them, and they should be relegated to the merchant. In Germany they are not permitted to sell anything of that sort in the drug stores, and it would be a good thing if we could follow that rule in this country.

DR. C. E. SKINNER, New Haven, Conn.—It seems to me that the only effective remedy for this evil is to have men like Dr. Robinson, who understand the composition of these prepara-

tions, read papers to us in our meetings and expose their structure. I believe there is more or less danger of the physician at large forsaking the scientific treatises on the materia medica for the literature which accompanies these preparations. There would be no use in appealing to the public through the press, because the average individual is very fond of prescribing for himself, and these concoctions, as well as the literature describing them, are easily obtainable at the druggist's by any one who chooses to ask for them. If the committee of two hundred which has been suggested should be composed of men who were qualified to and who would read papers like this to the balance of us I think it would be a more influential remedy than anything else.

DR. HUGH N. LEAVELL, Louisville, Ky.—I had hoped to hear this interesting paper because I am working along the same line. I believe we are perfectly correct in refusing to prescribe any preparation, the formula of which is unknown to us, but we are also, to a very great extent, dependent on the integrity of the druggist. The result is that many times we get a mixture which is not at all similar to the one that was prepared by a very competent pharmacist, and we are much surprised by the variability of the results of our prescriptions, so we should regulate in some way the sale of these so-called synthetic compounds. I had occasion to bring this matter before a local body of men in Louisville some time ago, and I was surprised at the variety of opinion expressed regarding these synthetic compounds. The fact remains that the manufacturer is using the physician as a drummer, and we continue to use any compound placed in our offices for trial, and if peradventure we get some good result we announce it to the profession and then the stock is placed in the corner drug store and sold promiscuously.

DR. C. S. N. HALLBERG, Chicago—There is a great difference in these preparations. Some years ago I made a classification of articles advertised in the leading journals and separated them into twenty-four classes. Some of them were objectionable because they were innocuous; others were decidedly objectionable. This is a work particularly for the pharmacists, and we should endeavor to clarify the situation and correct some of the abuses. There is a rule which requires that before any article can be admitted to the exhibition of the American Medical Association at an annual session, the formula must be placed in the hands of the chairman of the committee on exhibits, yet there are articles advertised in the journals which are not accepted even by sensational newspapers. It has been laid down as a principle that any patent medicine for internal medication, as distinguished from a food, antiseptic, etc., should not receive the patronage of the profession if advertised to the laity, nor should it appear in the medical journals. It seems to me that we should take some steps toward the correction of this evil for the protection especially of the physicians who are often misled into prescribing these medicines by the wily advertisers, only to be afterward used to "boost" them for self-medication to the public.

DR. B. PIROSH, Chicago—The correction of this evil is one of the hardest problems with which we have to deal. I do not regard as a remedy the conviction of the manufacturing people. The chief trouble lies in the insufficient teaching of pharmacy in our medical schools. Pharmacy and pharmacology ought to be taught more thoroughly, so that the physician at the bedside of the patient shall not hesitate to apply the best remedy he knows, and the best form, too, not being compelled to take refuge in remedies put up for sale by manufacturers and recommended to the learned man by means of pamphlets.

DR. W. J. ROBINSON—This question seems to me to be of the greatest importance. I say that a journal is responsible for its advertising pages. If the advertisement does no good and the physician is not induced to prescribe the remedy and the sale is in no way increased then the journal is accepting money under false pretenses; but the manufacturer is a mighty good business man, and if the sales were not increased he would very quickly drop the advertisement, consequently we know that the sales are increased and the advertising pages do aid in spreading the good remedies and the nostrums alike. I am not an extremist. There are some of these remedies to which I do not object, but what I fight against is the attempt to force us to use things about which we know nothing and for which extravagant assertions are made. The physician certainly can not do good if he does not know what he is prescribing and as shown, the composition of many of these things is not even hinted at, so that the physician can not know what he is prescribing.

Clinical Report.

WOUND OF THE MEDIASTINUM.

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Passed Assistant Surgeon United States Navy.
PORTSMOUTH, VA.

Introduction.—This case came under my care while I was stationed with the Army at Zamboanga, Philippine Islands, and while serving as medical officer in charge of the garrison at the naval station, and of the inhabitants of the Island of Basilan who are subject to the American governor. Basilan is the most southerly island of the Philippines proper, and has about eight thousand inhabitants, mostly Yacan and Mollussa Moros. The building assigned to me as a hospital was a rameshackle, tumbledown, barn-like affair, constructed on pilling over the water. Outside of my apothecary, an excellent man, my help was the poorest and most inefficient. Occasionally a young graduate in medicine, who was then in the lumber business at Port Isabella, came to offer his advice; but aside from this meager assistance, I was dependent entirely on my own supervision of the case, day and night.

The Injury.—Lam Ah Chan was employed as a cook by the naval and marine officers stationed in Basilan; he was a civilian employe, not an enlisted man. On the morning of May 29, 1902, he was shot through the chest by a Filipino mess attendant. I saw the man in less than two minutes after he was shot, finding him prone on the floor and unconscious. The lead bullet was imbedded in the wall behind the place where he had stood when he was shot. I picked the bullet out, after carefully measuring its distance from the floor, and taking notice of its course after it had passed through his body and penetrated the planking. The ball entered his body immediately below the third clavicle, grazing that bone, which deflected it downward and inward, passing in this direction out in the median line of the dorsum, at about the upper portion of the body of the fifth dorsal vertebra.

Symptoms.—There was immediate and complete paraplegia and loss of sensation below the point of exit, and at once it was suspected that the spinal column had been seriously injured, or at least that the cord had received some laceration. After the primary shock and unconsciousness had subsided, about an hour after receiving the wound, he vomited the contents of the stomach and nearly an ounce and a half of dark coagulated blood.

Diagnosis.—The possibility of perforation of the stomach and the wisdom of immediate operation was considered, but I decided against it, as I did not consider operation warranted, unless the bullet had zigzagged in its downward course, which would have been more than unusual from the position of its course, its velocity, and the general circumstances attending the case; perforation of the esophagus seemed more plausible. No blood or bloody mucus was expectorated, hence injury to the lungs or bronchii was eliminated, the bullet having escaped these in its course somewhere through the mediastinum. After it impinged against the body of the dorsal vertebra it again deflected, this time upward, as proved by its direction in penetrating the wood above the man's head. Examination of his spinal column revealed no crushing of the bones, as all movements of the back were normally produced, demonstrating no material injury to the bony structure. His quick recovery of consciousness and the minor degree of surgical shock, suggested either an extraordinary amount of vitality or that no harm had been done outside of considerable congestion of the cord with its consequent paralysis.

Course.—His temperature taken at intervals throughout this day remained below 100 F. At about 8 o'clock p. m., he again vomited, this time a watery fluid containing slightly more coagulated blood than was vomited in the forenoon. The pulse became weaker, remaining so for several hours.

May 30. Tympanitis began. The patient passed up during the day a small quantity of coagulated blood, presumably from the esophagus. Catheterization. Bowels emptied artificially. Given nutrient enemata. The patient complains of great pain all over the chest; given morphin sulphate ¼ gr. with atropin. Highest temperature 100 F.

June 1 and 2. Morning temperature 100; afternoon temperature, 102. Tympanitis disappeared. Continued rectal feeding, catheterization and symptomatic treatment. Patient does not complain of pain in any part of his body or limbs. On June 2 eggnog in small quantity by the mouth was retained without causing distress of any sort. The patient continues to expectorate small quantities of dark coagulated blood.

June 3. Pus formation in bladder discharging through urethra, no history of venereal disease. Irrigation of bladder with warm boric acid solution. Bed sores appeared over sacrum and on left heel. Position in bed is changed as much as practicable, avoiding possibility of internal hemorrhage and gastric distress.

June 5. Morning temperature, 100.4; afternoon temperature, 102.4. Pulse is fuller and stronger; it has never lost its marked regularity. Patient was given small doses of salol, gm. 0.3, t. i. d. He retains with ease and enjoyment eggnog by the mouth, in larger quantity than heretofore, and was given chicken broth by the mouth with good results.

June 6. Paraplegia is slowly ascending, there is no sensation to touch or pain below the sternum and below the point of exit of the bullet in his back. He is given as much nutriment as possible, takes it by mouth often, craves and enjoys semi-solid food.

Up to June 15, when his afternoon temperature ran up to 104.1, there have developed no new symptoms. His temperature during this interval ranged from 100 to 103, bladder symptoms remaining, although discharge of pus was very slight. Small doses of potassium iodid were given in hopes of causing absorption of spinal congestion. The following three days there was a fall in his body temperature and a general improvement. June 19, he had a very restless night, throwing his arms about and complaining of his condition. A constant watch had been kept over him to prevent his Chinese friends from supplying their own means of treatment, as well as to be ever ready to attend to his wants. There is no more pus formation in bladder. Decubitus is increasing in severity, notwithstanding every precaution to relieve undue pressure. He is displaying obstinacy to treatment, which is more than likely stimulated by the conversation of his Chinese friends.

June 20. The heart action being slightly depressed, he was given tincture digitalis, minims 8, by the mouth every four hours. Next day, condition about the same. A mild chill. Morning temperature, 100.2; afternoon temperature, 101.6. Hot water bottles applied under blankets. Hot drinks ad libitum.

There was no particular change in his condition for the next five days, save that the decubitus increased in spite of all effort to avoid pressure. His temperature ranged about 100. The night of June 27, he had a severe chill, with cardiac depression. All drugs except cardiac stimulants were discontinued from June 29, the patient became weaker, a gradual decline set in, and his mind, which up to now had been clear, began to show symptoms of a delusionary character. He refuses his food, and expresses a desire to make away with his life. He was given digitalis, strychnin and brandy, and as much concentrated food as can be retained.

July 3. A large slough was removed from the bedsore over the sacrum, exposing that bone in part and most of the coccyx. Pulse and respiration were becoming weaker, and the patient did not respond to stimulation readily. Morning temperature, 98.6; afternoon temperature, 102. Thorough cleansing of bedsores with pyrozone, and antiseptic protection. Patient gradually grew worse, lost consciousness the morning of July 6, and at 6:40 o'clock p. m. died.

Necropsy.—The following morning a postmortem examination was held, the governor general of Basilan calling in a civilian physician to take notes for the legal proceedings against the Filipino mess attendant. The gist of these notes is somewhat as follows:

Emaciation general; small unhealed abrasions lower right side abdomen and right thigh. Bedsores, both heels, right and left ankles, and over sacrum, latter about six inches in diameter. Appearance of wound of entrance: small raised scar, one inch to left and half inch below internal end of left clavicle. Pleura beneath wound of entrance adherent to apex of left lung. Left lung generally congested. Right lung normal. Some pus formation in lower end of esophagus, could not be absolutely or definitely located, owing to maceration and adhesion of tissues in that region. Appearance of wound of exit: small round scar, one-half inch to left of spinous process and between fourth and fifth dorsal vertebræ. Membranes of spinal cord congested to a marked degree. The cord itself congested to a less degree. There is no evidence of any injury to the bony structure of the vertebral column. Examination of the remaining viscera showed no evidence of any tearing, or inflammatory process caused by the passage of the ball in its course.

The Legal View of Insanity.—The vagaries of judges in dealing with the difficult subject of criminal responsibility are notorious, says our London correspondent. A man may be acquitted before one judge on the ground that he was insane when he committed a criminal act, whereas he would have been convicted before another. Medical evidence they often treat with scant respect, preferring to decide the question by their own lights. The following case is an example: A retired clergyman, aged 62, of Oxfordshire, England, committed no less than seven indecent assaults on girls aged from 11 to 13 within a period of six months. Previously he had had a hard-working and apparently blameless career. The medical evidence showed that there were hardening and thickening of the arteries, especially those of the head, and that he suffered from time to time from dizziness, attended with general mental confusion. There was also defective memory for recent events. He knew right from wrong in the abstract, but did not appreciate the moral significance of his acts in relation to the individuals concerned. The condition was regarded as progressive, and it was stated that the law or moral restraint had no effect on him. He did not understand that he was doing harm to the girls. Dr. Mercier, the eminent alienist, confirmed this evidence, holding that the prisoner was suffering from premature senile decay and both physical and mental deterioration, and that the case was certifiable. The judge pointed out to the jury that the prisoner had filled responsible offices, and had before the trial been regarded as sane. As to the "senile decay" described by the medical witnesses he repudiated the idea that mere decay of the faculties was evidence of insanity or irresponsibility. It lay for the defense to show that the prisoner did not understand that he was doing harm to the children. In conclusion he asked the jury as men of the world to exercise their "common sense." This intimation had the effect evidently desired. After a few minutes consultation they convicted the prisoner, who was sentenced to six months' imprisonment with hard labor. The "common sense" exercise by the judge and jury in this case was, as it often is, only "common ignorance." Common sense is a strong point, and a valuable one in the character of the ordinary English juror. His weak point is want of subtlety, and on an intricate or scientific question he requires the guidance of superior minds, instead of being told to exercise his "common sense." In the celebrated case of Mrs. Maybrick, who was convicted of poisoning her husband with arsenic, "common sense" had much to do with the verdict. An array of scientific evidence, if anything stronger than that of the prosecution, was produced to show that Mr. Maybrick had not died from arsenical poisoning at all. Instead of telling the jury that the prisoner was entitled to the benefit of the doubt on this point, the decision of which in the affirmative was a necessary preliminary to the verdict of guilty, the judge told them not to pay too much attention to the medical evidence, but to decide the case by the other circumstances, thus reducing an essential point to a merely collateral one. The jury exercised their "common sense," to which the fact that the prisoner had a lover strongly appealed, and convicted her.

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WOOD ALCOHOL.

Wood alcohol, which recently has come to be used extensively in the arts and in the manufacture of culinary and medicinal extracts, is a most dangerous substance when taken internally in sufficient quantity. When pure, it has a rather agreeable ethereal odor and a sharp, burning taste, and when ignited burns with a bluish flame, giving an intense heat. It goes under a variety of names, such as wood spirit, methyl alcohol, burning alcohol, Columbian spirit, naphtha and wood naphtha. It is used in the manufacture of ether, chloroform, formaldehyd and methyl chlorid, and also in the preparation of shellac varnish, since it is a good solvent of resinous substances. As there is no revenue tax on wood alcohol, it can be bought for about 50 cents a gallon, whereas grain alcohol is worth $3.60 a gallon, the tax being $3.17 a gallon. This difference in price is a great temptation for the unscrupulous manufacturer of flavoring and medicinal extracts, and it is frequently found that these contain a large percentage of wood alcohol. Thus it has been shown conclusively by Harlan[1] and by Main[2] that essence of Jamaica ginger, peppermint and lemon may contain as high as 75 per cent. of wood alcohol. The cheaper grades of alcohol also frequently contain wood alcohol.

Wood alcohol is, however, a powerful poison, and there is hardly a month in which one does not read or hear of a case of blindness or death resulting from its use or from the use of essence of lemon or Jamaica ginger which had been prepared with it. In the last eight years over fifty deaths due to drinking varying quantities of wood alcohol are mentioned in the literature, but this includes only a small percentage of the deaths which have been caused by that substance. Prior to 1896 only one case was reported. This is probably due to the fact that wood alcohol was not used so extensively then as it is now. Ten of these deaths resulted from drinking essence of lemon, eleven from essence of Jamaica ginger, and the remainder from drinking the pure alcohol, mixed with water. In most of these cases the victims had been out on a "spree," or had bought a quantity of cheap alcohol for a celebration at home, and some of them drank as much as a pint of the alcohol, while others drank ten to twelve bottles of essence of lemon or ginger. Death is said to have resulted, however, from less than two ounces. It is important to note in this connection that the action of methyl alcohol differs widely in different individuals. Perhaps the majority of those who drink it escape without permanent damage, while others may die or become totally blind, even if they have taken smaller doses. The exact mode of the production of death is not known, but the researches of Pohl and of Hunt have shown that methyl alcohol is excreted from the body very slowly. The important discovery has also been made that it is only partially oxidized in the body, and that its administration leads to the formation of a highly toxic acid (formic acid) and probably also formaldehyd. This is an interesting illustration of the fact that the body may convert one poison into another, which is far more powerful than the one that was ingested. Bongers has made the observation that when methyl alcohol is injected into the rectum of an animal some of it and also some formic acid is excreted into the stomach. These substances are presumably reabsorbed, either from the stomach or from the intestine, and some of them again excreted into the stomach, thus forming a "circulation" of methyl alcohol. The result of this "circulation" is that the irritant action of methyl alcohol on the digestive tract is exerted several times. As we shall see below, one of the most marked symptoms of methyl alcohol poisoning is gastrointestinal irritation, and this is probably due in part to the peculiarity of its excretion.

Another very important sequence of drinking wood alcohol is a sudden development of amblyopia, which frequently ends in total blindness. During the last eight years thirty-six cases of amblyopia following the use of wood alcohol in some form have been reported. Twenty-two of these cases followed a debauch during which wood alcohol was drunk; fourteen were caused by drinking essence of Jamaica ginger or lemon, and eight resulted from the inhalation of wood alcohol fumes while shellacking in a large vat or closed room for several days. The last mentioned cases are interesting, because they show how dangerous this drug is when taken for a period of days, even in very small quantities. This is no doubt due to a cumulative action, because the drug is excreted from the system so very slowly. The experiments of Hunt, de Schweinitz and Birch-Hirschfeld show that methyl alcohol may be given to an animal in a single large dose and have a less toxic effect than the same dose of ethyl alcohol. If, however, small doses are given daily to two different animals the one that is receiving the methyl alcohol dies within a week, and may become blind several days before death. The retinæ show marked degenerative changes. The one that is receiving ethyl alcohol, on the other hand, shows no bad effects, and may even gain in weight. If it is killed and its retinæ examined, no pathologic changes are found.

There is some difference of opinion regarding the pathology of methyl alcohol amblyopia. The experiments of Holden, Birch-Hirschfeld and Friedenwald

1. Ophthalmic Record, 1901, x, 61.
2. Journal of Med. and Science, 1903, x, 26.

have shown that there is a degeneration of the ganglion cells and macular layers of the retinæ caused by nutritional disturbances, due to the vasoconstrictor effect of the methyl alcohol on the retinal vessels. This degeneration is inevitably followed by a degeneration of the nerve fibers of the optic nerve. Other observers are of the opinion that there is primarily an interstitial optic neuritis, but it seems likely that the first view, which is the more recent, is correct. It is probable, however, that a degeneration of the ganglion cells of the retina and an interstitial neuritis are going on simultaneously.

The symptomatology of methyl alcohol poisoning presents a very definite picture, and hence it is not difficult to make a positive diagnosis. There may be first great muscular weakness with defective heart action, followed by intense gastrointestinal disturbances with severe nausea and vomiting, intense headache, giddiness, coma and delirium. Some cases die within twenty-four hours, but others recover only to find that they are nearly or totally blind. Some do not lose their sight for several days after they have recovered from their intoxication. These cases of blindness may improve under treatment, but nearly always relapse and remain in that condition. On examination there is found a contracted visual field with absolute central scotomata. The pupils are widely dilated and irresponsive to light. Ophthalmoscopically there is noted a blurring of the edges of the optic discs, positive optic neuritis and later complete optic atrophy.

The treatment of methyl alcohol amblyopia is unsatisfactory. Some cases have improved under free catharsis from jalap, calomel and salines, combined with diaphoresis from hypodermics of pilocarpin. This treatment, however, must be given during the first few days of the acute inflammatory stage if any beneficial results are to be expected. When atrophy begins to show itself strychnin is given hypodermatically in increasing doses until the point of tolerance is reached. Potassium iodid has also been used, but it must be remembered that the prognosis is very bad when signs of atrophy begin to appear. In most cases the affection goes on until complete blindness results, regardless of what treatment is given.

THE N RAYS.

About a year ago Blondlot, a French investigator, while working on polarization of *x*-rays, made certain observations which led to the discovery of a new variety of rays. He found that there were emitted from his focus tube invisible emanations which would pass through a thin plate of aluminum, could be focused by a quartz lens, and falling on a small electric spark would cause a very noticeable increase in the brightness of the spark. Work on these rays has very rapidly progressed during the past year, so that at present a large amount of data has been obtained regarding them.[1] The work has been limited largely to France and has been done mostly by the discoverer, Blondlot, and by Charpentier, who has developed the subject especially along physiologic lines. These rays have been named N rays from the first letter of the town Nancy, at which place is located the University of Nancy, where Blondlot has been carrying on his researches.

As stated, the presence of these rays was first detected by the effect they produced in increasing the brightness of a small electric spark. Later it was discovered that a small, blue flame would also increase in brightness under their influence. It was found, too, that the presence of the rays could be detected by the effect which they had of increasing the luminosity of phosphorescent bodies. Sulphid of calcium, previously insolated, is very excellent for this purpose and is much used. Even phosphorescent bacteria can be used to detect the rays.

The sources of N rays are numerous, and new sources of these emanations are being discovered continually. As has been stated, they were first observed coming from a focus tube. Later it was found that they are emitted by an Auer incandescent gas mantle and by an ordinary gas flame, but not by the blue flame of a Bunsen burner. The sun emits them in abundance. The Nernst lamp is a prolific source, and the filament continues to emit them for several hours after the light is extinguished. A strip of metal, as silver or platinum, heated to redness is a very abundant source of the rays. Jegou found that a wire carrying an electric current was a source of N rays. He also observed that a simple means of producing them consisted in closing the circuit of a Leclanche element for a time. The liquid of the cell apparently absorbs the rays, and then becomes an energetic source of them. Compression, torsion and strain of many solids will cause an emission of the rays.

Of extreme interest are the physiologic sources of these rays. Charpentier showed that the luminosity of phosphorescent bodies was increased in the vicinity of a muscle, especially when contracting. The same is true for nerves and nerve centers, the brightness varying with the activity of the tissue. By this means it is possible to trace out the course of nerves, such as the median, the ulnar, or the fibers near the skin. The area of the heart and diaphragm can be mapped out, owing to the muscular activity of these structures. Interesting observations were made on the spinal cord. The course of the cord could be clearly traced. When the arm contracts, the emission of rays from the cervical enlargement increases the luminosity of the sulphid screen, indicating an increased activity of this part of the spinal cord. The area of Broca can be mapped out, and a difference observed between the right and left sides of the brain, the latter having the greater effect on the phosphorescent screen. It is interesting to note that inhibitory phenomena, such as the suppression of glandular activity or inhibition of the heart by the vagus,

1. See Comptes Rendus de l'Acad. des Sciences, 1903-04.

cause an increase in the emission of the rays. This is analogous to the heat given off at the moment of cardiac inhibition.

The eye is found to be a prolific source of N rays. On the other hand, the sensitiveness of the eye is increased under their influence. This effect can be produced also by allowing the rays merely to effect the ocular centers in the brain. In fact, it has been found that the other senses—taste, smell and hearing—all become more acute under their influence. Meyer has shown that the rays are emitted by plants. The active parts, such as the green leaves and the small roots, give them off in abundance. The colorless plants also emit them. He concludes that the emission of these rays is a function of nutritional activity. Lambert observed that they are emitted during the action of a ferment on albuminous substances. This may be the real explanation of their occurrence in living tissues, for in the cells processes controlled by enzymes are continually taking place, and, in fact, life may be dependent on such activity.

These radiations may be observed by making use of the following instructions, which we quote from the *Scientific American:*

A quantity of sulphid of calcium (phosphorescent) is spread on a piece of black cardboard and fixed by collodion so as to form a thin layer; the spot should be at least 0.8 inch in diameter. It is then solarized moderately. The screen is observed in a dim light, darkening the room according to the brightness of the surface. The screen should be observed by indirect vision without looking at it too strongly. It must be remembered that the variations of brightness are produced gradually, with an inertia which depends on the thickness of the sulphid; it is therefore of advantage to diminish the thickness of the layer. The proper precautions should be taken for eliminating outside effects.

We propose to comment further on the subject next week.[2]

THE SCHOLAR AND THE STATE.

The old conception of the scholar as a man given over to debating such questions as to whether or not a crocodile is an insect, or as to how many angels can stand on the point of a needle, has long since passed away. The seclusion of learning within cloistered walls was an inevitable accompaniment of the feudal state of society. If, in that stirring age, a man with a frail body and a thoughtful mind was to live long enough to debate anything at all, it had to be within some such shelter as that afforded by the monastic life. This necessity left its impress on scholarship for generations after the conditions that had brought it into being had disappeared. In the eyes of the world the typical scholar has long been the absent-minded, myopic pedant whose harmless vagaries have been kindly tolerated by his more robust brethren of the real world. The Casaubons and the Dry-as-dusts have excited some amusement and a little pity for many generations.

The modern scholar, fortunately or unfortunately, is not of this type. For better or worse he has been drawn into the current of the life around him, and has come to share in large measure the thoughts and emotions of his fellow-beings. There are those who lament that the leisure of the college professor has given way to a multitude of appointments and engagements strictly comparable to those of a man of affairs; that the professor's study has given place to the "office," and that administrative efficiency rather than scholarly attainment is often the key to professorial advancement. Be that as it may, these features all mark the change that has taken place in the position of the scholar in the world around him. It is a curious fact that while no acute observer can doubt that such a change has occurred, the tradition of unpracticality and worldly inefficiency still lingers. This is particularly true in our own country, where the advice and opinion of the trained man and of the competent scholar are often flouted. Our newspapers, indeed, deliver brawling judgments all day long on all things unashamed, and it may be said of many of our public men, as John Morley said of Macauley, that they "seek Truth, not as she should be sought—devoutly, tentatively, and with the air of one touching the hem of a sacred garment—but clutching her by the hair of the head and dragging her after him in a kind of boisterous triumph, a prisoner of war and not a goddess."

The detachment of the scholar from the state, however, is not even here so marked as it once was. When one of the most eminent among the purely scientific members of the American medical profession consents to become president of a state board of health, when another is appointed director of public health in one of our largest cities, and when another undertakes as a public duty to direct the production of diphtheria antitoxin for a great state, it can no longer be charged that the American scholar is indifferent to the welfare of the state. The scientific man is coming to expect and the state to demand that he shall participate actively in securing for the state the benefit of the discoveries made by its individual members.

We owe our present encouraging outlook in this country very largely to the precept and example of men like Pasteur, Virchow, Koch and our recent guest, Professor Ehrlich. These men have never divorced the life of the scholar from that of the citizen, and while pursuing brilliant and recondite investigations, have still continued to apply to questions of public polity the latest and best results of modern scientific research. The conduct of a model municipal laboratory, the preparation and preservation of material for the exact standardization of diphtheria toxin and antitoxin, and the supervision and guidance of many lines of investigation undertaken for the public good are services of a kind that can be rendered only by a man who stands in the forefront of scientific investigation. They can be rendered only by

2. Abstracts of articles on the N rays and editorial comments have appeared in THE JOURNAL, Jan. 23, 1904, p. 275, abstract 50; February 6, p. 404, abstract 14, and March 19, p. 804, abstract 34.

one who possesses that genius for executive work which is no less necessary for the planning and carrying out of elaborate scientific researches than for the effective control of practical measures directly affecting the public health.

The services of the investigator to the state are in a measure their own reward, but it has also happened more than once in the history of science that investigations undertaken with a practical end in view have led ultimately to far-reaching theoretical advances. It is a familiar story how Louis Pasteur, a scholar who recognized in full measure his responsibilities to the state, became fired with the ambition to produce a French beer that should equal the best German beers. The outcome of this patriotic ardor was the germ theory of fermentation, which in turn gave birth to the germ theory of disease and revolutionized modern medicine. In the same way it is true that Professor Ehrlich's attempt to obtain an accurate standard for diphtheria toxin and antitoxin has not only successfully accomplished the immediate results sought for, but has led him on to brilliant and far-reaching theoretical considerations, which have already profoundly influenced medical thought and practice, and have opened up vistas of future progress along which the scientific imagination travels in excited anticipation.

THE OCCURRENCE OF THE WIDAL REACTION IN JAUNDICE.

From its earliest use it has been known that certain errors were liable to occur in connection with the Widal test for typhoid, especially with regard to the degree of dilution of the blood to be tested and the time-limit of observation, but these possible errors have been so frequently pointed out and are so easily avoidable that the profession in general has had a great deal of confidence in the reaction. Within the last two or three years a further source of error has been pointed out, namely, the fact that certain cases of jaundice give the Widal reaction, and seemingly with dilutions as high as those generally used in the diagnosis of typhoid fever.

This aspect of the question has been reviewed by Libman[1] in this country, and by Steinberg[2] in Germany. Libman comes to the conclusion that jaundice *per se* does not cause the agglutinating substances to appear in the blood. The reported cases in which jaundice was accompanied with the Widal reaction, he believes, were atypical cases of typhoid or cases in which certain sequelæ of the disease associated with the typhoid bacillus were present. In some cases in which this assumption was positively disproved, he thinks that there was an infection with some germ closely allied to the typhoid bacillus giving rise to the so-called group reaction, or that an improper interpretation of the reaction was made. In four cases of his own in which jaundice was accompanied by the Widal reaction, he was able to demonstrate the typhoid bacillus or some allied organism in every case.

The conclusions reached by Steinberg are very similar to those of Libman. He also points out that jaundice itself is incapable of producing the reaction, this fact being shown both by the negative Widal in many cases of human jaundice, and also by experimental work on the lower animals. Experiments made on animals by injecting them with the different constituents of bile also show that no single constituent or group of constituents of this fluid can cause the reaction. He argues from this that there must be some factor in cases of icterus with the Widal reaction which is not present in all cases of jaundice. His own work and his interpretation of the literature lead him to think that this factor is infection, and he urges that only in infectious icterus is the Widal reaction present. The infectious agent in most of these cases has been shown to be either the typhoid bacillus or a closely allied organism, as the colon, proteus or paratyphoid bacillus. In a few cases, according to Steinberg, this has not been the case, only the ordinary pus cocci having been found. Steinberg lays stress in these cases on the group reaction, just as Libman does, but he calls attention also to the great peculiarities of individual reaction, and thinks that they play an important part in some cases.

The results of these investigations should lead us to exercise greater care in the interpretation of serum reactions in general, and in jaundice cases in particular, though as typhoid cases with jaundice are relatively rare, they are not of surpassing practical importance.

1. Medical News, No. 5, 1904.
2. Münchener med. Woch., No. 2, 1904.

MEDICAL ADVERTISING.

One of the hopeful features of the modern movement in advertising is the announcement from several important magazines that medical advertising is no longer to find a place in their columns. Some time ago we called attention to the fact that the managers of the *New York Times* had issued a card describing their policy with regard to advertising, and refusing to give place in their columns to medical advertisers of any kind. More recently the *Ladies' Home Journal* has made the same announcement. Through agents, it has now become well understood that certain other publications will not renew contracts for advertising space with patent-medicine houses.

This is certainly encouraging. Any sensible man who studies the advertising announcements of the proprietary medicine house, or of the advertising quacks and specialists, can not fail to be impressed with the idea that their only object is to make money and not at all to do any good to the deluded victims, who, urged on by illness, real or imaginary, apply to them with the hope of relief. There was a time when it was considered not improper to advertise lotteries of various kinds, until the amount of cheating and imposition involved in such concerns finally brought them under the govern-

mental power which regulates the passage of matter through the mails. Modern medical advertising would remind one very much of lottery announcements written in alluring style, but with no prizes. Surely they, too, should come under governmental control in the same way.

Often very little investigation would show that not only do the so-called patent medicines furnished by advertising firms accomplish no good, but that they actually tend at last to do harm. Consumptives, grasping at a straw, and discouraged by the progress of their disease, are tempted to try some of the highly vaunted remedies so alluringly brought to their notice by the newspapers, and as most of these remedies contain materials that disturb the stomach and lock up the secretions, consequently doing harm rather than good, precious time, in which the consumptive by means of fresh air and good food might really have been making headway against his disease, is lost, until finally further resistance to its progress becomes impossible. Only too often does one hear the story that women suffering from carcinoma of the uterus have taken for months some remedy for female troubles, which has delayed their application to a physician until operations are either hopeless or have become much less likely to prove life-saving.

Why, then, should not the restriction with regard to sending improper material through the mails apply to papers containing swindling patent-medicine advertisements as well as to attempts of swindlers of other kinds? Beside, many of them are so worded as to be actually obscene. There is the absurd stuff about sexual weakness, lost manhood, shrunken parts, about loss of virility and the like, sure to be the source of unhealthy curiosity on the part of young people, beside giving rise to many imaginary ailments that for a time make life miserable for young adults. Supposed abortifacients are paraded with the most nauseating publicity.

Reputable papers must, if they would keep their reputation, take up this newer policy of giving their readers truth, not only in the news columns, but also in the advertising columns, and there is seldom truth in patent-medicine announcements.

Unfortunately there are many religious newspapers that still seem to consider that they can accept medical advertisements without belittling themselves. The reason is very evident—money is needed to run a paper, and nowhere is it more plentiful nor can better terms for advertising space be obtained than among the medical advertisers. This very reason ought to stamp such demands as suspicious. Money is easily made where questionable means are employed and where value is not given for payments made. There is absolutely no excuse for the lax attitude of the managing editors of religious periodicals in this matter. Nothing can justify their lending of the influence which their spiritual position gives them to help conscienceless money-makers to exploit the sick and afflicted.

EDDYITES STILL TRIMMING.

Apropos to a recent death in Buffalo, N. Y., from diphtheria under Eddyite treatment, the Christian Science publication committee sends to a lay paper a communication quoting from the by-laws of the Christian Science church to the following effect: "If a member of this church has a patient that he does not heal, and whose case he can not fully diagnose, he can consult with an M.D. on the anatomy involved." This is a concession. It must be a recent one, as we doubt it was included in Mrs. Eddy's inspiration, and there probably will be many more such, including permission for consultation on the physiology, pathology, and even therapeutics in the future. The statement illustrates pretty well the fact that Eddyism is a cult that intends to live, whether its doctrines do or do not, and that the profitees will have her successors, probably in the money-making syndicate, which, we believe, at present controls the concern.

AMERICAN LITERATURE ABROAD.

Dr. C. A. L. Reed, a former president of the Association, is a contributor to the April number of the *Review of Reviews* in an interesting article on American literature abroad. From the inquiry which he has made he finds that the English language is but little cultivated in many continental countries, where American literature is hardly felt as an intellectual stimulus. He suggests a propaganda something on the order of the Alliance Francaise, an institution devoted to the spreading of the French language and literature throughout the world. Such an organization, he thinks, would go far to raise the opinion of American civilization and broaden the culture of the people among whom it existed. Dr. Reed is already known as a literary man by various contributions, and in this case has stepped well outside the medical line, but is as original and interesting in this as in everything else. We may sometime take occasion to notice more extensively the extra-medical contributions of American physicians, which are by no means insignificant, though the part that the profession takes in general literature is hardly recognized by the reading public.

LUMBAR PUNCTURE IN UREMIA.

Although lumbar puncture was originally introduced as a diagnostic rather than a therapeutic measure, cases have not been wanting to show that the proceeding is sometimes followed by improvement in symptoms. It has been frequently noted during the epidemics of cerebrospinal meningitis which have occurred in recent years, that a great improvement occurred in many cases following the removal of spinal fluid, and a similar improvement has also been noted in one or two cases of spinal hemorrhage. Seiffert[1] has just reported some remarkable results from the use of lumbar puncture in uremia. His experience covers only cases of uremia occurring as a complication of scarlatinal nephritis. In several such cases he withdrew from five to thirty cubic centimeters of spinal fluid with excellent results. Cases are reported with cramps, loss of con-

1. Münchener med. Woch., No. 10, 1904.

sciousness and stertorous breathing, which, under this treatment, recovered consciousness in half an hour, and subsequently recovered entirely. According to Seiffert, one puncture is all that is generally necessary. He briefly quotes a French writer who has recently treated uremia from kidney lesions other than scarlatinal nephritis by this method, and urges that the results obtained strongly suggest that a more extensive trial be given the method.

THE COAGULATION OF STARCH.

Any question concerning the chemistry of starch can not fail to excite the interest of biologists, especially those interested in physiology. One of the difficult problems in botany has been the manner in which starch is formed and deposited in the cells of plants. Having once been formed its transformations into the dextrins and sugars is better known. Wolff and Fernbach[1] have performed some interesting experiments tending to throw much light on this problem. They have succeeded in extracting from grains in the course of germination, green leaves, etc., a diastase which they call amylo-coagulase, and which has the property of precipitating soluble starch from its solutions. This ferment seems to be an entirely different substance from amylase, which is also present in such substances, for its coagulating power is completely lost by heating to 65 C. for five minutes, whereas the liquefying and saccharifying properties of the amylase is retained even when heated to 70 C. The action, therefore, can not be explained as a reversible process due to amylase. The study of such substances may throw much light on the so-called reversibility of enzyme action, which apparently does not rest on an absolutely secure basis.

THE CORRECTION OF FECAL INCONTINENCE BY SUBMUCOUS INJECTION OF PARAFFIN.

Incontinence of feces is such an annoying complication of a number of disorders that any means promising good results in its correction should be cordially welcomed. In some instances the sphincter still retains some power, but not sufficient to close completely the anal orifice, while in other instances the paralysis of the sphincter is complete. It has been suggested that under the conditions first noted the lumen of the bowel can be narrowed by the injection of paraffin into the submucous tissues on the inner surface of the sphincter, and thus diminish the work of the latter, so that it may be adequate to occlude the remaining lumen. For the cases of the second group various plastic procedures have been recommended, with the object of surrounding the anus with muscular fibers diverted from their natural function, the gluteus maximus and the levator ani being the muscles ordinarily utilized for this purpose. Attempts, frequently unsuccessful, have been made to give the wall of the rectum a valvular action, by dissecting out this portion of the bowel, twisting it on its long axis and refixing it, or by producing a sharp curvature or kink in its lower portion. In two cases of the latter character Mr. H. A. Burgess[2] obtained good results by the injection of paraffin into the lower portion of the rectal wall. The condition was due in the first instance to operations for the relief of anal fistula, and it had not yielded to two corrective plastic operations. The second case, in a boy of seven, was complicated by a prolapse of the rectum, and both conditions had been present from infancy. In the latter, following correction of the fecal incontinence by the injection of paraffin, a plastic operation was successfully performed for the reduction of the abnormally large anus.

1. Comp. Rendus. Acad. Sciences. vol. cxxvii, No. 18, 1903.
2. Lancet, March 12, 1904, p. 716.

THE PROGNOSIS OF TYPHOID FEVER.

It seems certain that the prevalence of typhoid fever has been diminished in no small measure since its exciting cause has been demonstrated, and the necessary steps have been taken to restrict the dissemination of the typhoid bacillus. To this end care in the disposal of the discharges, particularly the feces and the urine, and the insurance of an uncontaminated water supply have largely contributed. It is equally certain that hand in hand with this reduction in the morbidity there has been a lowering of the mortality, as a result of the institution of rational therapeusis, including especially the practice of systematic cold bathing, according to the method of Brand. There is still considerable room for improvement in both of the directions named, and the amount of typhoid fever in a community may be considered as an index of its hygienic intelligence. While the prognosis of the disease in general is thus relatively favorable, it is by no means easy to predicate the outcome in the individual case. It may, therefore, be useful to note the conclusions reached in this connection by Dr. R. E. Sedgwick[1] as a result of observations made in 460 cases of typhoid fever. He finds that the younger the patient the more favorable the prognosis, as mild cases are commonest in the young, while fatal complications are more likely to occur in the old. If the onset of the disease be gradual, the case is likely to prove a mild one; but if the onset be sudden, a severe attack may be anticipated. If the case occurs during an outbreak of typhoid fever, the general character of the outbreak may be of guiding value in prognosis, consideration being given, however, to the age and the constitution of the patient. The degree of pyrexia need not of itself be regarded as unfavorable in a patient of strong bodily health. The pulse-rate is a good indication of the severity of the attack. Sudden changes in the pulse-rate are important as indicating the onset of complications. Constipation is to be looked on as a favorable symptom as contrasted with diarrhea, which is unfavorable. Meteorism is an unfavorable symptom, as it predisposes to perforation. Should perforation occur, operative measures hold out the best chance. Dryness of the tongue is a valuable guide in prognosis. Intestinal hemorrhage occurs chiefly in serious cases. The earlier it occurs the more serious its significance. Early nervous symptoms must be regarded with concern, as an indication either of the severity of the attack or lack of resistance on the part of the patient. Most of the complications —of which perforation, peritonitis and pneumonia are

1. Birmingham Medical Review, February, 1904, p. 70.

to be considered among the most serious—tend toward recovery. When perforation occurs the only treatment consists in abdominal section, with repair of the lesion. The chances of recovery are better in patients treated in hospitals than those treated in their homes.

VIVISECTION.

In the *Outlook* of April 9 appear two papers on the vivisection problem, both of which are somewhat noteworthy. The first, by Bishop Lawrence of Massachusetts, takes the stand which we think is held by most cultured and enlightened people at the present day, viz., that the benefits that vivisection has accomplished for mankind far outbalance any necessary suffering that may be inflicted on the lower animals; even the single matter of antitoxin in diphtheria, which is quoted by the Bishop, is enough to redeem it from the charges that have been made. The sacrifice of many of the lower animals for the sake of preventing mortality and suffering is justifiable in every sense of the word. The question arises whether this should be regulated, and Bishop Lawrence gives rational objections to the regulation as they appear to him. Dr. Leffingwell's paper is far more temperate than would be expected from the utterances that have been credited to him in the past. He does not deny the utility of vivisection, but claims that the practice of it is abused, and that it is carried on needlessly and with unnecessary cruelty to the subjects; therefore, legal regulation should be required, together with periodical inspection and publication of all experiments. He is studiously temperate in his language, and yet he says a few things which seem to indicate an unjudicial state of mind on the subject. The party, however, with which he trains at the present time certainly would not be fully satisfied with his utterances in this communication. One has only to read the editorials in the little anti-vivisection papers which are sent to nearly every publication in the country to appreciate this fact. Legal regulation, if brought about through the efforts of these individuals, would be more or less influenced by their opinions and scientific research would be seriously hampered. The objections to this are well stated by Bishop Lawrence, and he points out that in Great Britain, under the restrictions now required, the work of scientific research is notably crippled. The editorial notice in the *Outlook* discusses the subject in a thoroughly common-sense point of view, and gives what we believe is the consensus of opinion of thinking people on the subject at the present time. The world appreciates the benefits which vivisection has produced in the relief of disease, the lessening of human and animal suffering, for it is not mankind alone that benefits by these researches. One of the greatest of American writers, in perhaps one of his most striking productions, portrayed the narrowing and dehumanizing effect of a too self-concentrated devotion to a philanthropic hobby. There is nothing more tempting to human weakness than an overestimated self-conscious virtue, and its evil influences on the human character are amply portrayed in modern zoophily. Humanity is the last of their thoughts to all appearances, their sympathies are wrapped up in the lower creatures and the welfare of their own species is hardly considered. Even the ordinary moral requirements are sacrificed to the holy cause which has become their idol, as is shown in the recent misrepresentations abroad, the legal consequences of which were somewhat unfortunate to the leader of the British antivivisectionists. It is to be hoped that the common sense of the majority will not be overcome by the dictation of a fanatic and narrowed philanthropy or zoophily in this matter so important for the advancement of science and medicine and for the welfare of the world.

RATES TO ATLANTIC CITY SESSION.

As we go to press we learn that the Central Passenger Association has granted half rates to the coming session of the American Medical Association. Thus two of the most important passenger associations have granted this rate, and it is likely that the rate will now prevail all over the country.

Medical News.

ILLINOIS.

Societies Favor Heyburn Bill.—Will County and Jersey County medical societies have endorsed the Heyburn pure-food bill, and have signed a petition urging its passage.

Ill and Recovering.—Dr. Ezra H. Ferris, a retired physician of Champaign, is reported to be seriously ill.——Dr. Arthur F. Comings, Rockford, who has been ill since January, resumed practice April 4.

Elgin Hospital to Be Enlarged.—Sherman Hospital, Elgin, which is under the charge of the Elgin Woman's Club, is to have an addition to cost about $20,000. The greater part of this amount has been received by bequests or gifts.

Society's Golden Jubilee.—On April 7 McLean County Medical Society celebrated its semi-centenary by a banquet at Bloomington, at which about 150 were present. Dr. Franklin C. Vandervort, president of the society, was toast master. The following toasts were proposed: "Medical Organization," Dr. Otho B. Will, Peoria; "History of the Society, 1854-1879," Dr. Charles R. Parke, Louisville, Ky.; "History of the Society, 1880-1904," Dr. William E. Guthrie, Bloomington, and "The Future of the Society," Dr. James R. Taylor, Bloomington.

Chicago.

Easter Hospital Collection.—The Easter offerings in the Presbyterian churches of Chicago amounted to about $6,000, which goes to aid the Presbyterian Hospital.

No Prosecution.—The case against "Dr." A. W. Van Bysterveld of Englewood and Muskegon, Mich., was dismissed April 4 for lack of prosecution. He was charged with mistreating a defective girl patient whose father shot the alleged physician in the leg.

Decrease in Death Rate.—During the week ended April 9 582 deaths were reported, 14 less than for the previous week, and 64 less than in the week before, the respective annual rates per 1,000 being 15.03, 15.40 and 16.32. Pneumonia caused 127, or nearly 22.6 per cent., of the deaths; consumption, 65; heart diseases, 49; Bright's disease, 42, and violence, 33 deaths.

Alumni Dine.—Fifty members and invited guests of the Western Alumni Association of the University and Bellevue Hospital Medical College, New York, met at the annual banquet April 11. Dr. David W. Graham was toastmaster and toasts were responded to by Drs. Egbert LeFevre and Joseph D. Bryant of New York City; Dr. Green V. Woollen, Indianapolis, and Dr. John M. Ristine, Cedar Rapids, Iowa. Dr. Charles C. Hunt, Dixon, was elected president of the association.

Increased Mortality.—The record which the Department of Health calls its "sanitary balance-sheet," which at the end of 1894 covered a period of forty-four years—1857-1894—showed that, comparing the mortality of the first and last decades, the deaths from nervous diseases had increased 90 per cent.; from Bright's disease, 94 per cent.; from cholera infantum, 123 per cent.; from pneumonia, 160 per cent.; from

bronchitis, 330 per cent.; from heart disease, 300 per cent., and from cancer, 812 per cent.

Decreased Mortality from Nervous Diseases.—Comparing this decade with the previous one, there is shown a decrease of 40.2 per cent. in the mortality from all forms of nervous disease, and of nearly 60 per cent. in the deaths from convulsions. Better hygiene of child life, better milk supply, better knowledge among mothers, sufficiently account for this latter reduction; the Department of Health remarks that it is not so obvious what has caused the reduction of more than one-fourth in the deaths of adults from nervous diseases.

MARYLAND.

Regulation of Barber Shops.—A bill has passed both branches of the legislature regulating the practice of barbering, establishing a state board of barber examiners and providing for the sanitary inspection of barber shops.

Sewerage Bill Passed.—The sewerage bill has passed the legislature after a hard struggle extending over twenty years, and it is ready for submission to the people. It provides for a ten-million-dollar loan. As a six-million-dollar loan has already been provided for improvement of wharves and docks destroyed by the fire, and as the sewerage loan will have to be provided by direct taxation, it will have to be deferred for the present and submitted later to popular vote.

New-Made Laws.—The governor has signed the following bills: Authorizing Hagerstown to build a hospital and to borrow money for drainage system; authorizing Washington County to levy money for a hospital at Hagerstown; state registration of nurses; creating barber inspectors; to incorporate sewer company of Salisbury; to protect the citizens from certain communicable diseases, especially tuberculosis of lungs and larynx; omnibus appropriation bill. The items of the omnibus bill were published in THE JOURNAL, April 2, p. 900, April 9, p. 963. It passed with the following changes: Increase appropriation of Baltimore Eye, Ear and Throat Hospital from $2,000 to $5,000 annually, and cut off appropriation of $10,000 for new building; allow $5,000 annually to Union Hospital of Cecil County, provided an equal amount is subscribed privately; allow $5,000 per annum to pay indebtedness of Springfield Hospital for the Insane; allow St. Agnes Hospital $3,000 annually, and Franklin Square Hospital $3,000 annually and $1,800 additional for 1905 to aid in equipment and furnishing.

Baltimore.

Fined for Contempt of Court.—Dr. Frank G. Meyer, for failing to appear as witness, after having been summoned, was fined $27.50, in the Court of Common Pleas, March 29.

Resumes Practice.—Dr. Alexander Hill, formerly fire department physician, has recovered his health after two operations for a large growth involving mouth, throat and neck, and will resume practice.

Physician Wins Suit.—The suit in the Superior Court against Dr. William H. Burch, for alleged incompetent setting and treatment of a broken limb, $5,000 damages being claimed, has been decided in favor of the defendant.

Distinguished Frenchmen Visit Baltimore.—Drs. Jean Louis Faure and Stephen Merlin of France were the guests of Dr. Howard A. Kelly last week. The former, who is a surgeon of note, lectured and operated at the Johns Hopkins Hospital. They left for Florida, April 8, and will make a tour of the country.

Personal.—Dr. H. Lee Franks has resigned as health warden, and the health commissioner has appointed Dr. Clarence P. Erkenbrack to the vacancy.——Dr. Dudley Williams, Boston, will make Baltimore his home.——Prof. George M. Stratton, associate professor of psychology in the University of California, has accepted the professorship of experimental psychology in the Johns Hopkins University, and will enter on his new duties in the fall. He has done much original work on the senses, especially vision, and is also said to be a successful teacher and very effective lecturer.

Deaths and Smallpox.—There were 229 deaths last week, an annual rate of 21.43 per 1,000. The principal causes were consumption, 36; pneumonia, 30; heart disease, 21; Bright's disease, 18; congestion of brain, 11; cancer, 10, and influenza, 8. Two cases of smallpox were reported. The health commissioner has been allowed $1,000 for expenses in fighting smallpox. He stated that there had been 18 cases since January 1, and that 25 persons were now quartered at the quarantine detention barracks who had to be cared for. He expected to have 15,000 persons vaccinated last week.

Medical Club Anniversary.—The Rush Medical Club, a students' club of the University of Maryland, held its fifty-fourth anniversary celebration, March 26. It was founded in April or May, 1850, by seven students as a quiz club, and has kept up an unbroken existence to the present time. The present membership is 20. It is one of the oldest, if not the oldest, of the students' medical clubs in this country. The founder of the club, Dr. William J. Wroth, Baltimore, now in his seventy-fifth year, was present, and addresses were made by him, Drs. Randolph Winslow, Harry Adler, Hiram Woods, W. T. Watson, and A. S. Matthews. Dr. E. F. Cordell read a historical sketch of the club.

Endowment for University Medical School.—The Alumni Association of the Medical Department of the University of Maryland is endeavoring to secure a permanent endowment fund for the school of medicine. The following constitute the present board of trustees of this fund: Judge Henry D. Harlan, Gen. Lawrason Riggs, Dr. Samuel C. Chew, Dr. T. E. Atkinson, Mr. Clayton C. Hall, Mr. Allan McSherry, Dr. Thomas A. Ashby, Dr. Charles G. W. MacGill and Dr. Eugene F. Cordell. Last year the will of Dr. W. H. Crim bequeathed directly to the medical department his entire estate after the decease of certain beneficiaries. The sale of the renowned Crim antiques amounted at that time alone to over $70,000. However, this bequest for many years will not be available to assist the University.

The Rockefeller Gift to the Johns Hopkins Hospital.—As announced last week, Mr. John D. Rockefeller has given $500,000 to the Johns Hopkins Hospital to prevent the curtailment of usefulness of that institution by the losses incurred by the great fire. The money is given outright and will be turned over to the trustees in whatever form they elect. A few days after the fire the matter was brought to the attention of Mr. Rockefeller by Drs. William Osler and William H. Welch, and Mr. Rockefeller sent his attorney to Baltimore to investigate. The attorney spent two days in Baltimore. Nothing further was heard until April 5, nearly two months, and the friends of the institution began to lose heart. On that day a letter was received by Dr. Osler from Mr. Rockefeller, Jr., saying that "in view of the high character of work which the hospital and medical school are doing in medical instruction and research, including the training of nurses, which work, he understands, will be otherwise materially curtailed because of losses," his father had determined to give the amount named to the hospital. Mr. Rockefeller's attorney estimated the losses at about $499,137. It is said that Mr. Rockefeller could not have been more careful in his investigation of the affairs of the hospital if he had contemplated investing money in it for the purpose of gain. Every item in the annual statement of the hospital was carefully gone over by the agent, and every one of its investments was carefully scrutinized. Judge Harlan, president of the board of trustees of the hospital, had prepared a list of well-known philanthropists with a view of appealing to them, but on the advice of Dr. Welch no action was taken until Mr. Rockefeller was heard from. The value of the property destroyed aggregated about $1,300,000, and the net loss to the institution was about $500,000. The gift will not permit of extension of the operations of the hospital; it will not, therefore, be devoted to any special purpose, but to the continuance of the work hitherto done without any curtailment. The burned property will be rebuilt and it is hoped that its value will increase and the good work of the hospital be thus augmented. The credit of this great benefaction is ascribed to Drs. Welch and Osler. It is said that Mr. Rockefeller became interested in medical research through a copy of Dr. Osler's "Practice of Medicine," which was sent him by his agent, Mr. Gates, and that the influence thus exerted led him to the gifts of the $200,000 to the Rockefeller Institute, supplemented later by $1,000,000 for the permanent home of the institute in New York, and also the gift of $1,000,000 made to Harvard University Medical School. The Rockefeller Institute for Medical Research was incorporated in June, 1901, under Dr. Welch as president, and others. The work has been carried on in a number of university laboratories. Last year it was decided to secure a permanent home, and three blocks of land in New York City, extending from Sixty-fourth to Sixty-seventh street, along Avenue A, were purchased for $700,000. Dr. Simon Flexner, formerly connected with the University of Pennsylvania, and Johns Hopkins Medical School, is in charge of it. Dr. Osler is of the opinion that Mr. Rockefeller's gift to the Hopkins Hospital will be followed by other gifts which will enable the work of the hospital to expand. The hospital has not received many gifts, compared with other institutions. Dr. Howard A. Kelly gave about $20,000 for a new operating

room and an addition to the gynecological wards. Two ladies of Baltimore gave $6,000 for the tuberculosis work, and Mr. Henry Phipps' recent gift of $20,000 for the same object is fresh in memory. The governor of Maryland and the mayor of Baltimore have both expressed to Mr. Rockefeller the thanks of state and city for his noble benefaction.

MASSACHUSETTS.

Will Filed.—The will of the late Dr. J. Henry Robinson, Southboro, has been filed. The estate is appraised at $76,000.

Golden Wedding.—Dr. and Mrs. Joshua B. Gould, West Somerville, celebrated the fiftieth anniversary of their marriage March 23.

Bequests.—The late Senator Tyner, Holyoke, in his will devised $10,000 each to the Holyoke City Hospital and to the House of Providence Hospital.

Dealers in Impure Milk Fined.—Two milkmen, who sell to stores and private houses, and four store-keepers were fined, April 4, in the Charlestown Court, for the poor quality of the milk in their possession.

Visiting Nurses.—The Instructive District Nursing Association reports that their 15 nurses cared for 7,857 patients in 1903, making 75,000 visits. The expenses were $15,063, leaving a deficit of about $1,200.

The Emergency Hospital in Salem is flourishing. A new wing containing four wards is nearly ready for occupancy, and property in another part of the city has been leased for a branch, which will be established at once.

To Establish Tuberculosis Hospital.—The committee of public charitable institutions has introduced in the Massachusetts legislature a bill to establish the Massachusetts hospital for consumptives with a board of five trustees and an appropriation of $150,000.

Eventual Bequest.—Under the will of Mrs. Hannah K. Grant her interest in a Salem estate is awarded to her sister, after whose death it is to go to the Salem Hospital Corporation. On similar conditions the hospital eventually will receive one-fourth of the residue of her estate.

Personal.—Dr. Orville W. Collins, South Framingham, has been appointed assistant surgeon for the Boston and Albany system, between Riverside and Westboro.——Dr. Edward Roth, Vineyard Haven, has qualified as medical examiner for the northern district of Duke's County.

NEBRASKA.

Schools Closed.—Owing to the prevalence of diphtheria in the country round about Bertrand, the public schools have been ordered to be closed for two weeks.

Mishaps to Physicians.—Dr. Andrew D. Nesbit, Tekamah, is recovering from a serious operation on the ear, performed a month ago.——Dr. Marshall D. Bedal, Blair, has been declared insane, and committed to the insane hospital at Lincoln.

Healer Cast Out.—"Dr." Frank H. Peters, a so-called "magnetic healer" of Beatrice, against whom 30 charges of practicing medicine without a license had been filed, was found guilty on one count and fined $50 and costs. On his promise to leave the state, the other charges against him were dismissed.

Tuberculosis Must Be Reported.—According to a ruling of the State Board of Health physicians are required to report promptly all cases of consumption, so that they may be quarantined when necessary. Any physician, householder or landlord who fails to comply is subject to a fine of $100. Consumption is thus formally included in the list of contagious diseases.

NEW HAMPSHIRE.

Quarter of a Century Old.—The Portsmouth Medical Association celebrated the twenty-fifth anniversary of its organization, April 5, by a banquet, at which 22 were present.

Hospital for Dover.—The executors of the late Arioch Wentworth of Boston have paid over to the authorities of Dover $100,000, for the establishment of the New Wentworth Hospital in that city.

Personal.—Dr. Percy Bartlett has been made instructor in anatomy in the Dartmouth Medical College, Hanover.——Dr. A. E. O'Connell has secured the position of house physician at the Mary Hitchcock Memorial Hospital, Hanover.——Dr. and Mrs. Moses C. Lathrop, Dover, recently celebrated their golden wedding anniversary.

Society for Prevention of Consumption.—The New Hampshire Society for the Prevention of Consumption was organized with headquarters at Concord, "to instruct consumptives in the ways and means to prevent the spread of the infection, and to better their physical condition." Dr. Orlando B. Douglass, Concord, was elected chairman; Dr. John H. Neal, Rochester, treasurer, and Dr. Henri T. Fontaine, Concord, secretary.

NEW JERSEY.

Against Consumption.—Orange has an anti-tuberculosis committee and has started an active crusade against the disease. A free dispensary for tuberculous patients, with daily clinics, is one of the weapons.

Medical Examiners Reappointed.—On March 25 Governor Murphy reappointed the following physicians members of the New Jersey Board of Medical Examiners: Drs. Armin Uebelacker, Morristown; William Perry Watson, Jersey City, and William H. Shippa, Bordentown.

Thousands for Hospitals.—The total appropriation for the State Tuberculosis Sanitarium amounts to $265,000.——Nearly $13,000 has been received for the building fund of the North Hudson Hospital, Union Hill.——The building fund of the Mountainside Hospital, Montclair, now amounts to $20,542.56.

Personal.—Dr. James M. Stewart, Paterson, was appointed a member of the tenement house commission by the governor.——Major Charles R. Blundell, Paterson, surgeon Fifth Infantry, has resigned.——Dr. Talbot R. Chambers, for nine years in charge of the eye, ear, nose and throat department of the Jersey City Hospital, has resigned, and Dr. Wallace B. Fyle has been elected his successor.——Dr. Archibald Mercer, Newark, is recovering from an operation for appendicitis, performed March 30.——Dr. L. Eugene Hollister has been appointed a member of the Newark Board of Health, vice Dr. David L. Wallace, deceased.

NEW YORK.

Smallpox in Buffalo.—Several smallpox cases have been found by the Buffalo Health Department.

Bill for a Letter.—The senate has passed Senator Whitlock's bill to change the name of the Bushwick Hospital, Brooklyn, to Bushwyck Hospital.

Typhoid in Vassar Hospital.—There are 25 cases of typhoid fever in the Vassar Brothers' Hospital, Poughkeepsie. The source of the infection has not yet been determined.

Erie County Society Ratifies.—A special meeting of the Erie County Medical Society was held in Buffalo, April 9, at which the report of the joint committee of conference on consolidating the Medical Society of the State of New York and the New York State Medical Association was approved.

Preventable Epidemics Expensive.—Dr. Daniel Lewis, state health commissioner, calculates the loss in the state during 1903 from five preventable diseases at $94,960,000, estimating the value of a life as $5,000. He does not consider in this aggregate the losses from injury to business due to quarantining localities where infectious diseases exist.

New Health Officers.—The following are among recent appointments as health officers: Dr. William Taylor, Canastota; J. Spencer Purdy, Seneca Falls; Dr. Cyrus Kay, Herkimer; Dr. Charles V. Patchin, Dansville; Dr. John H. Doughty, Matteawan; Dr. I. C. Washburn, Chatham; Dr. Jacob A. Rich, Greenwich; Dr. William N. Campaigne, Green Island; Dr. William T. Tanner, Oneida; Dr. Bentley S. Bourne, Hamburg; Dr. John F. Carleton, Waterloo; Dr. George F. Regan, Medina, and Dr. Thomas E. Spalding, Salamanca.

Personal.—Dr. Charles W. Pilgrim, superintendent of the Hudson River State Hospital for the Insane, Poughkeepsie, has been appointed president of the State Commission in Lunacy. His acceptance of this position was dependent on the assurance that partisan politics would not shorten his term of office.——Dr. Philip C. Washburn, Watertown, who has been in charge of the High School Typhoid Hospital, has been appointed to the staff of the Manhattan State Hospital, Ward's Island.——Dr. B. C. Johnson, Buffalo, has returned from Jamaica.

Dr. Orton's Semi-Centennial.—The physicians of Binghamton and Broome County, April 5, presented to Dr. John G. Orton of Binghamton a loving cup, accompanied by their greetings and congratulations, on the fiftieth anniversary of his ending the practice of medicine in Binghamton. Dr. Orton's experience is almost unique, for he has passed by more than a score of years the average age attained by physicians, and for a half century has not only been in active practice, but during all these years has not changed his location. His record is most honorable, and the physicians of the state of New York showed their appreciation when in 1890 they elected him president of the

New York State Medical Association. So far as known, there is only one other survivor, beside Dr. Orton, of those who practiced medicine in Binghamton fifty years or more ago. The exception is Dr. N. S. Davis, now of Chicago, who is Dr. Orton's senior by nearly 11 years.

Coroner's Bill Passed.—After four years of constant effort Senator Elsberg's bill to substitute medical examiners for coroners was passed by the assembly almost without objection. The bill does not affect the coroners now in office, except that as each coroner's term expires, a successor is not to be elected. The proposed new statute provides for the appointment of a chief medical examiner and six medical examiners for Manhattan Borough, four for Brooklyn, three for Queens and two each for the Boroughs of Bronx and Richmond. They are to be physicians, and are to be appointed by the mayor, to take office Jan. 1, 1906. They are to be appointed, as far as practicable, from the coroner's physicians in office December 31, 1904. The salary of the chief medical examiner is to be $6,000 a year, and those of the medical examiners are to be $3,500 each. The medical examiners are to be a part of the department of health. They are to assume all the duties of the coroners with the exception that they are to make their reports in all suspicious deaths to the city magistrates, and if an examiner is not satisfied with the result of examination into the cause of death, he is to notify the district attorney and make an autopsy. This new bill will save $60,000 annually to the city in salaries.

New York City.

Bogus Doctor Fined.—"Dr." C. F. Starken was found guilty of practicing medicine without a license and was fined $100.

Gift to Infirmary.—Mrs. John E. Parsons has given $1,000 toward a permanent endowment fund for the New York Eye and Ear Infirmary.

Dr. Conrad Sentenced.—Dr. E. Conrad, who was convicted of attempting criminal operation, was sentenced to state prison for not more than two years nor less than one.

Fire Department Physicians.—Dr. Linnaeus J. Hunter has been appointed surgeon of the fire department for the boroughs of Manhattan and the Bronx, and Dr. James B. Kennedy for the boroughs of Brooklyn and Queens.

Smallpox on Atlantic Steamer.—The steamer *Sicilia*, which arrived off New York from Naples, April 6, with 1,116 passengers, was detained at quarantine with one case of smallpox. The patient was sent to Kingston Avenue Hospital; about 150 of his fellow passengers will go to Hoffman Island for observation, and the steamer will be disinfected.

Contagious Diseases.—For the week ended April 2, 1,935 cases of measles were reported to the sanitary bureau with 29 deaths; 342 of diphtheria and croup, with 39 deaths; 303 of scarlet fever, with 30 deaths; 56 of varicella, with no deaths; 289 of tuberculosis, with 185 deaths; 19 of typhoid fever, with 12 deaths, and 31 deaths from cerebrospinal meningitis were reported.

Annex to St. Luke's Hospital.—Plans for the large pavilion to be built for St. Luke's Hospital have been filed with the building bureau. The new pavilion is to be ten stories high, and will adjoin the present hospital building. It is to be fireproof, fully equipped for general hospital purposes, and is to have a roof garden. It is the gift of the Plant estate, and will cost about $400,000.

Personal.—Dr. William T. Bull, professor of surgery in the College of Physicians and Surgeons, has resigned.——Dr. John B. Knapp was the recipient of $5,000 "in grateful remembrance of his devotion" to the husband of Julie F. H. Nevins.——Dr. John A. Hill has been elected surgeon-in-charge of the eye, ear, nose and throat department of the Harlem Dispensary, vice Dr. Edward Fridenberg, deceased.

OHIO.

License Revoked.—The State Board of Medical Registration and Examination has revoked the license of Dr. S. V. Young, Washington.

Society Endorses Pure Food Bill.—Highland County Medical Society, at its meeting held in Hillsboro, April 6, unanimously adopted a resolution urging the passage of the Heyburn pure food and drug bill, and instructed the secretary to inform Senator Heyburn of its action.

Decrease in Infectious Diseases.—But 48 cases of infectious diseases were reported for the week ended April 10 in Cincinnati. This shows a great diminution from previous weeks, and it is hoped that the various epidemics, typhoid, measles, and influenza, that have been raging for so many weeks past, are now at an end.

Cincinnati Hospital Interns.—The competitive examination for internes to the Cincinnati Hospital for the ensuing eighteen months was decided at a meeting of the staff, April 9. The winners in order of average were as follows: Jesse S. Wyler, Medical College of Ohio; Joseph L. Ranschoff, Medical College of Ohio; Charles W. Smith, Medical College of Ohio; George S. Mytinger, Miami Medical College; Oscar Behrman, Medical College of Ohio; Oscar Berghausen, Medical College of Ohio; A. E. Osmond, Medical College of Ohio, and E. B. Reemelin, Medical College of Ohio. Alternates were elected as follows: O. D. Barber, Medical College of Ohio; Alvin D. Heavenrich, Miami Medical College; Charles D. Herzel, Medical College of Ohio; and George H. Holt, Miami Medical College. There were in all nineteen contestants, thirteen from the Medical College of Ohio and six from the Miami Medical College.

PENNSYLVANIA.

Isolation Hospital Closed.—For lack of smallpox patients the Hospital for Contagious Diseases at Chester was closed March 22.

Donation to Westchester Hospital.—P. M. Sharples donated to the Chester County Hospital $4,502, to be used in the erection of two receiving rooms and a fireproof elevator and stairway.

Half a Century in Practice.—Dr. Richard Armstrong, who has been in practice 50 years, 48 of which were spent in Lost Haven, was the guest of honor at a banquet given by the medical profession of the city, March 11.

Not Chicken-pox.—Boswell has been having a mild epidemic diagnosed as "chicken-pox" by the local physicians. The town is now under strict quarantine on account of smallpox, of which 16 cases have been located.——Several cases of smallpox have been discovered in Clifton Heights, Delaware County. Every effort is being made by the local authorities to prevent the spread of the disease.

Personal.—Dr. Jonathan C. Biddle, Fountain Springs, has been appointed assistant surgeon, and assigned to the Eighth Regiment, N. G. Pa.——Dr. Andrew H. Halberstadt has resigned as president of the Pottsville Board of Health.——Drs. J. Guy McCandless and Joseph E. Willetts, Pittsburg, have been reappointed members of the State Medical Board.——Dr. Robert F. Trainer has been appointed smallpox physician of Williamsport, vice Dr. Edward Lyon, resigned.

State Health Conference.—The next meeting of the Associated Health Authorities and Sanitarians of Pennsylvania will take place at Gettysburg, Franklin County, May 26 and 27. This will also constitute the thirteenth annual sanitary convention. The subjects of smallpox and typhoid fever, and of proper legislation for the prevention of the spread of these diseases will be very fully discussed. The registration of vital statistics and its importance to the well-being of the state, will be presented in an address by Dr. Cressy L. Wilbur, the statistician of the United States Census Bureau, who for many years has been at the head of the Department of Registration of Vital Statistics of Michigan.

Philadelphia.

Personal.—Dr. Melvin M. Franklin, a member of the major-surgical staff of St. Joseph's Hospital, has been appointed to a similar position in the Jewish Hospital.

Summer Course at University.—The Medical Department of the University of Pennsylvania will conduct its usual summer course in medicine, beginning May 9 and extending over six weeks.

Hospital Physicians Chosen.—The trustees of Frankford Hospital, at their meeting April 2, elected the following physicians to the general staff: Drs. William H. Morrison, Charles M. Nassau and S. K. Bolton, to the major-surgical staff; E. E. Kieser to the major-medical staff, and George C. Hanna to the neurological staff.

Bequests.—Simon Muhr, in his will, left a large portion of his estate to benevolent institutions. The following have been benefited: Jewish Hospital, $5,000; Jefferson Medical College, $1,000; Philadelphia Home for Incurables, $1,000; Philadelphia Polyclinic, $500; Philadelphia Lying-in Charity, $400; Woman's Hospital, $400; Children's Hospital, $400, and Philadelphia Hospital for Women, $200.——By the will of Herman Stolze, the Episcopal Hospital is a beneficiary to the extent of $3,000.

Hospital Reports.—During the month of March, 79 patients were admitted to the Methodist Episcopal Hospital, and 801

were treated in the dispensary. The total visits made to the dispensary were 1,996. The Medico-Chirurgical Hospital treated 297 patients in the hospital proper, 418 in the accident room and 5,218 in the dispensaries.——Germantown Hospital admitted 114 patients and discharged 97. During the month 1,425 cases were treated in the dispensary.——St. Joseph's Hospital admitted 222 patients, with 141 remaining from the month of February, making a total of 363. There were 2,092 patients treated in the dispensary service.

Dr. Faure in Philadelphia.—Dr. J. L. Faure, the eminent French surgeon and chief of the major-surgical department in the Cochin and Trousseau hospitals at Paris, has been the guest in this city of Dr. John G. Clark, professor of gynecology in the University of Pennsylvania. Dr. Clark gave a dinner in his honor, and those present were Drs. William W. Keen, J. Wm. White, John H. Musser, Alfred Stengel, Robert Le Conte, Hobart A. Hare, B. C. Hirst and Charles H. Frazier. Dr. Faure and Dr. Howard Kelly of Johns Hopkins University were also guests at a reception given at the Woman's Hospital. In a brief address Dr. Faure paid a glowing tribute to the proficiency of women physicians in America, and deplored the fact that no such opportunity for the study of medicine and surgery by women existed in France.

Typhoid Still Raging.—There were 380 cases of typhoid fever reported during the week. This is the greatest number ever reported in a similar period. The deaths from the disease reached the record-breaking number of 30, which indicates that the fever is not of a mild type. Last week there were 321 cases and 24 deaths. That section of the city now being supplied with filtered water seems to be particularly free from the disease. The health authorities are persuaded that the disease has reached its height. There have been 2,445 cases of typhoid fever reported in the city since January 1. The total number of deaths this week reached 597, an increase of 9 over those of last week, and an increase of 97 over the corresponding period of last year. The deaths from pneumonia, which have been abnormally high since January 1, numbered 90 for the week.

GENERAL.

The American Medico-Psychological Association will meet in St. Louis, May 30 to June 3, only morning sessions being held. Dr. C. B. Burr, Flint, Mich., is secretary.

City Death Rates for the Quarter.—In the six cities having populations of more than half a million each, viz., New York, Chicago, Philadelphia, Boston, St. Louis and Baltimore, the five mentioned below, from which statistics are furnished to the Chicago Department of Health, have the following estimated mid-year populations (1904), total deaths during the first quarter and annual death rates:

City.	Population.	Deaths.	Rate.
New York	3,437,202	21,538	25.22
Chicago	1,950,000	7,675	15.77
Philadelphia	1,408,154	6,305	23.39
Boston	517,850	2,224	18.95
Baltimore	541,000	3,068	22.73

London has a death rate very near that of the lowest one above mentioned. The bulletin of the Chicago Department of Health says that a table of vital statistics for London during 1903 gives the death ratio per 1,000 as 15.62. This is the lowest ever recorded for that city—recent previous years having rates of 17.8 for 1902, 17.4 for 1901, 19.2 for 1900 and 19.5 for 1899. The marked decrease of the last three years is accounted "a fact probably very intimately associated with the mild winters of those years."

FOREIGN.

Prosecution of a Physician by a German Court of Honor.—A certain physician of Dresden has been fined by the medical court of honor for Saxony to the extent of nearly $400 and costs for contracting with a charlatan.

Gratuitous Distribution of Antiseptics.—Since 1901 antidiphtheria serum has been distributed free to the poor in the province of Luxemburg. By a recent decree antiseptics are also to be dispensed free of cost to the poor.

Death of a Patient from Negligence.—Dr. H. of Ulm, has been sentenced to three months' imprisonment on account of the death of a patient in a hot air bath in his private sanitarium. The apparatus was not properly managed and the patient was burned to death.

Personal.—Dr. Roswell Park, Buffalo, N. Y., who is in Germany attending the German Surgical Congress, was the guest of honor, April 9, at the regular weekly meeting of the Anglo-American Medical Association of Berlin.——Dr. J. M. Swan, surgeon in charge of the Canton (China) Hospital, visited the Philippine Islands in March.

The Colonial Congress.—Paris is to hold a congress for general hygiene and international prophylaxis, in the week of May 29. It will be presided over by Prof. A. Charrin, with Prof. Brault of Alger as vice-president. The officials connected with any branch of the government service in the colonies are entitled to membership in the congress *ex officio*.

Anniversary of the First Injection of Calomel.—On April 7, 1864, Professor A. Scarenzio of Pavia made the first injection of calomel. His friends celebrated the fortieth anniversary of this event by presenting him with a gold medal at a banquet tendered him by Italian dermatologists and syphilologists, presided over by Professor Golgi, dean of the university.

Radium-Bearing Ore.—The Austrian authorities have set aside about 50,000 pounds of the radium-bearing pitchblend at Joachimsthal and have divided this amount between the Vienna Academy of Sciences and Professor Curie of Paris, the latter paying for his consignment. Both of the recipients must agree to use the pitchblend and its products solely for scientific purposes and not market any of it.

Philanthropy of the Milan Savings Bank.—The Milan Savings Bank has recently distributed nearly two million dollars among the small hospitals throughout the province of Lombardy. This benefits also indirectly the Milan hospitals, relieving them from the influx of patients from the country districts. The bank announces that its income is derived in large measure from the country districts, and it wants them to share to some extent in the profits.

Memorials to Gussenbauer and Cramer.—The little town in Carinthia where Gussenbauer was born has issued an appeal to his friends and pupils to aid in the erection of a worthy memorial to him there. Subscriptions will be received by Prof. von Eiselsberg, Vienna 1, Mölkerbastei 5. A portrait bust is also to be erected in memory of Prof. F. Cramer in the hospital at Wiesbaden, the seat of his labors. Subscriptions are received by the banking house of M. Berlé and Co., Wiesbaden.

Compulsory Disinfection of Rented Apartments.—The authorities of Buenos Ayres are considering an ordinance proposed by the department of health which provides that every householder must notify the board of health the moment when a tenant leaves. The board will then send an inspector and the place can not be rented again until the sanitary measures he deems necessary have been taken and the place disinfected. The house owner pays only for the expense of disinfection, but neglect to comply with the ordinance entails a penalty.

Legal Responsibility of Editor for Charlatan Ads.—The Breslau courts have recently inflicted a severe penalty on the advertisement editor of the *Breslauer Generalanzeiger*, a daily paper. He published several ads of a quack named Malisius, who offered to treat all abdominal and sexual affections without interfering with the patient's occupation, and without diagnosis, promising a rapid cure. The court assumed that the editor must have known the fallacy of such promises, and fined him $750. An appeal to a higher court was refused.

Decreasing Numbers of Blind Persons in Prussia.—The proportion of the blind to 100,000 inhabitants has fallen from 92.09 in 1871 to 61.95 in 1900. Out of a total number 4,932 were blind from early childhood, 15,183 became blind later, and the history was not known of 1,181 others. Nearly 5,000 are engaged in some occupation, including 1,275 employed on farms or in gardens and 1,263 in wood-working. The number of deaf mutes has slightly increased, although the proportion to population is a trifle less. More than half are self-supporting, 6,281 in farming and 5,387 in the clothing and cleaning industries. The number of blind mutes has diminished from a total of 288 to 215.

The Common Communion Cup.—The president of the German imperial board of health has recently officially requested the secretary of the interior department to suggest to clergymen that they turn the communion cup a little as they pass from one person to the next, thus bringing a fresh place on the rim to the next person communing. He states that this is the general custom in Berlin, supplemented sometimes by wiping the rim with a napkin from time to time. He begs that the secretary will use his influence to have this simple but perfectly adequate precautionary measure generally adopted. One of the Berlin clergymen in whose church the individual cup has been introduced gives the history of the movement in favor of the individual cup in a communication quoted at

length in the *Allg. med. Ct.-Ztg.* for March 19, 1904. He cites extensively from American literature.

Official Warnings from the Carlsruhe Board of Health.—The local board of health at Carlsruhe, Germany, has issued a warning, published in the daily press, against a certain plaster advertised to cure rheumatism, etc. The warning states that the plaster contains lead oxid and hence should be dispensed only in drug stores. The warning further cautions against the "Interatate Department of Health in Chicago," which is sending out circulars claiming to cure all the diseases hitherto incurable or only cured with difficulty. Treatment is by letter and medicine is sent on payment of the fee of $6 to $12. A few months ago the board of health issued a similar warning against the oxygen institute, Novavita, of Berlin. The proprietor of the institute sent an insulting letter in reply to the president of the board of health, and the latter at once instituted suit against him on the ground of defamation in his public capacity. The court decided for the plaintiff, fining the proprietor $7.50 and costs.

The Medical Insurance Company in Belgium.—About three years ago a certain number of physicians in Belgium decided to found an accident insurance company. The aim was to pocket the profits of such an enterprise instead of serving merely as the packhorse contract doctors while the profits were being poured into the laps of outsiders. La Médicale, as the new corporation was called, has succeeded beyond all anticipations. It has now nearly $25,000 annual income from premiums, an unparalleled growth in three years for such an undertaking in Belgium. A 5 per cent. dividend may be declared this year, although the medical officers of the society are remunerated much more justly than in ordinary insurance companies. The success of the enterprise is due in large part to Dr. L. Merveille of Chênée, editor of the *Gazette Médicale Belge*, now in its sixteenth year. He with the other nine directors of the society have demonstrated that it is possible to conduct an insurance company on a paying basis without necessarily grinding down its medical officers to starvation remuneration.

Positions for German Physicians in Foreign Lands.—An office was established at Hamburg a few years ago in connection with the local medical society to supply information in regard to medical positions on ships, and in the German colonies and elsewhere. The government has recently formally notified all the consuls and vice consuls and urged their cooperation. The aim is to obtain information of good openings and also to prevent their being usurped by unworthy or incapable incumbents. Question blanks were sent to the consuls to be filled out in case an opening offers and mailed to the Hamburg office. The questions ask the population of the place where a physician is desired; how many Germans or others are there in the place who would be liable to give the newcomer practice; what special qualifications are desirable; familiarity with what languages; what examination will have to be taken; if so, in what language; what hospitals are there and their capacity; would a German physician be able to perform operations in them; how many physicians are there in the place and vicinity; how many German physicians and their names; what is the climate; what epidemic diseases prevail and how is the place best reached, and what are the traveling expenses? How much capital is required for the first settling down, and for support during the first two years? What parties desire the presence of a German physician? Names and addresses of these persons and corporations? Are any inducements offered for a physician to locate there? Is a settled income guaranteed?

The Trance Dancer.—Medical circles in Germany are much interested at present in a certain Mme. Magdeleine G., a Russian, who gives a most artistic dancing performance in a hypnotic sleep. The performance is a musicale, but after being hypnotized by her manager, Magnin of Paris, the sound of the music impels her to dance, while she falls into a cataleptic condition the moment the music ceases. Our current German exchanges contain a number of articles on the subject. Fürer writes to the *Deutsche medicinische Wochft.* that the entertainment seems like a revival of the barbarous practice of exhibiting insane patients to the gaping public. Grünwald in a letter to the *Münchener med. Wochft.* takes much the same stand. He expresses the hope that the Munich Medical Society, which is the first scientific society before which the trance dancer has appeared, will insist on the pathologic character of the performance and protest against its being permitted, as a public entertainment. Loewenfeld contributes an article showing the features which stamp the performance as genuine, citing in detail the facts which speak against simulation of the hypnotic condition, or rather of the catalepsy from indirect suggestion. Schlagintweit, on the other hand, is convinced that the hypnotic setting is merely an advertising trick. This difference of opinion and the various discussions have been duly exploited in the lay press, and the *Schlaftänzerin* is the sensation of the day in Munich. The laws in Germany forbid exhibitions of hypnotism for profit, but her manager, Magnin, has succeeded in evading the law to date by some legal quibble. He is a professional magnetic healer and has exhibited the trance dancer only in a few private circles hitherto, mostly in artists' studios at Paris.

LONDON LETTER.

Dr. Jameson.

Dr. Jameson, the leader of the famous raid into the Transvaal, once more, by a turn of the wheel of fortune, occupies a commanding position. He has been appointed prime minister of Cape Colony. The career of this extraordinary man can be compared only with that of the heroes of romance. In turn he has been a successful colonial surgeon, the conqueror of a savage country, a colonial administrator, the leader of a troop of raiders, a felon condemned to death by the Boers, sentenced to imprisonment by his own countrymen, a vigorous parliamentarian, and now at last a prime minister. His disposition is particularly amiable, and not even his opponents deny his honesty. The fact that he has survived the hideous blunder of the raid speaks volumes. Like many other colonists who have made their mark, he is a Scot.

Chicken-pox Mistaken for Smallpox.

A serious outbreak of smallpox is reported in a Yorkshire town. February 10, 9 cases had occurred among young women employed in clothing establishments in Hebdenbridge. After three weeks the disease was thought to have been stamped out, but a number of cases then arose simultaneously, principally in school children. They were supposed to have been infected by one family in whom the disease lingered unknown. Of 45 patients sent to hospital 35 were unvaccinated. Some unnecessary delay in the removal of the patient occurred in consequence of the parents hoping that the disease was chicken-pox. Indeed, some attempted to pass the disease off as chicken-pox because of the supposed slur on their cleanliness. An outbreak of smallpox has occurred in the east end of London. There are 129 cases in hospital and in fifteen days 42 cases have been removed to hospital. Most of the cases have occurred in common lodging houses. The London County Council is on the alert to check the disease and has re-enacted the order, made during the last epidemic, making chicken-pox a notifiable disease so that cases of smallpox which may be mistaken for chicken-pox shall not escape the attention of the health authorities. The council has also appointed two experts as consultants, whose opinion any physician can obtain free of charge in a doubtful case of smallpox.

Plague in Johannesburg.

The latest returns show four fresh cases and one death, all in colored persons. A particularly sad feature is that among the five deaths of Europeans which have occurred since the beginning of the outbreak are those of Dr. Marais, who contracted the disease in the discharge of his duties, and of his wife and daughter, and of Dr. Macneil, who attended them. The sanitary authorities have dealt promptly with the outbreak. A board has been appointed to take charge of all the arrangements. At a special meeting of the town council $25,000 was voted as the initial expenditure. The whole town, especially the native quarters, is subjected to the strictest sanitary supervision. The coolie location, where the outbreak was discovered, will be burned to the ground as soon as the inmates can be removed. Meanwhile a cordon has been drawn round it and all ingress and egress prevented.

Mediterranean Fever.

The annual report of the health of the army on the whole is satisfactory, but Mediterranean fever shows a considerable increase. In forces amounting to 18,470 there occurred 315 cases, of which 238 cases were contracted at Malta.

Medical Graduates' College and Polyclinic.

The fifth annual meeting of the Medical Graduates' College and Polyclinic has been held. The report is most satisfactory and shows that a successful effort has been made to overcome the serious financial difficulties of the institution. A great accession of members has recently taken place and the total

now reaches 927. Four sessions of practical classes, each of six weeks' duration, and a vacation of three weeks were held. Three hundred and fourteen clinical investigations were carried out in the laboratory and this department is receiving steadily increasing support. A course of 186 lectures by various men of eminence has been established and is open to members without extra fee.

A Revaccination Bill.

A revaccinantion bill, promoted by the Imperial Vaccination League, has been introduced into the house of commons by Sir John Batty Tuke, M.D. It provides for the revaccination of all children between the ages of 12 and 13 except those who obtain certificates of exemption in the way provided by the act of 1898 or those who may be exempted on medical grounds. The bill is backed by all the medical members of parliament and by other prominent politicians. Among the reasons given for the passing of the bill are the following: By the age of 12 the protection of primary vaccination is greatly diminished. Protection against smallpox by revaccination would be much cheaper than by providing costly hospitals and attempting to deal with epidemics by isolation. The provision of smallpox hospitals in London has recently cost $4,500,000 and the current expenditure is enormous.

Correspondence.

That "Neurasthenia" Foolishness.

TOLEDO, O., March 30, 1904.

To the Editor:—Your editorial of March 26 under the title "The Tyranny of Words in Medicine," wherein you refer to the unscience of the word neurasthenia as at present used in medicine, is in harmony with an extreme tiredness which has grown on me from the use of that word. The word started high in the medical profession and so was entitled to respectful consideration, but I believe that it long since had its full mete of attention, and I believe too that now both the physician and the sick man are better off without it.

I feel relieved and grateful to any one who gives even a plausible cause, like "eye strain," for the conglomeration of nervous symptoms and their functional manifestation which are now bunched together under that alleged nosologic entity. Within my time this varying jumble of symptoms has been said to be "uric acid diathesis," chronic malaria, and "autointoxication," and have been indexed under these different heads. For a time each of these substitutions of one unknown quantity for another has satisfied the medical mind, or at least has furnished a working hypothesis for the treatment of the sick. But no one ever succeeded in curing a patient by treating the symptoms, not any more than a child can be cured by treating the train of nervous symptoms which are dependent on an irritating prepuce. Spectacles would do such a child no good even though the eyes had become secondarily affected, and it is equally as silly to try to cure a similar complex of symptoms in one who is suffering from defective vision without giving him appropriate lenses.

A diagnosis of neurasthenia is on a level with a diagnosis of "neuralgia," and a diagnosis of "cutting teeth." I am not an oculist, but I think that articular rheumatism is a very common affliction of astigmatic school children. I think, too, that such children have better health during vacation, when they, presumably, use their eyes less.

I do not make any money by sending patients to oculists, but in obscure nervous troubles, or in unaccountable functional derangements of any kind I have learned, or possibly it has become a hobby of mine, to have the eyes examined before prescribing for them. Of course, I do not intend to say that I do not look for other exciting causes for the troubles, nor that I always find the real cause; nor that when the oculist says the patient needs lenses that the symptoms always rapidly disappear. What I am trying to say is that I do not make a diagnosis of neurasthenia. I would rather any time say outright that I do not know. To diagnose neurasthenia is to beg the question, and what is worse and still more unscientific, is to say that neurasthenia is the cause of some local trouble, like "asthenopia," for instance.

J. L. TRACY.

The Common House Fly as a Carrier of Typhoid.

CHICAGO, March 29, 1904.

To the Editor:—In THE JOURNAL, March 19, 1903, I published the report of certain investigations carried on in the Memorial Institute for Infectious Diseases, which apparently showed that the bacillus of typhoid fever could be found on the legs of flies which had visited vaults containing typhoid discharges. The organisms which were isolated, five in number, corresponded morphologically and culturally with the bacillus of Eberth and also were agglutinated by the serum of a rabbit immunized against the latter. The weak link in the chain of evidence, however, was the fact that agglutination could not be obtained in dilutions higher than 1-200. It is true that two control organisms, isolated from the blood of typhoid patients, also failed to agglutinate in higher dilutions, but the opinion generally held now, that it is only sera of high potency which will serve to differentiate the typhoid bacillus from closely allied organisms, renders this control inadequate. At that time no stronger serum was available and as it was desirable, for many reasons, to publish the report as soon as possible, the additional experiments needed to establish the identity of the bacillus isolated from flies were necessarily postponed. Later in the spring the serum from an immunized goat was obtained with the following result: (The organisms are named as in the original report.)

Control	1-7,500 + 1-10,000	incomplete.
A 1	1-7,500 + 1-10,000	incomplete.
A 2	1-7,500 + 1-10,000	incomplete.
A 3	1-5,000 + 1-7,500	incomplete.
P 1	1-5,000 + 1-7,500	incomplete.
P 2	1-7,500 + 1-10,000	incomplete.

These tests were all made macroscopically, in test tubes.

The immunization of guinea-pigs with the different bacilli was interrupted by an absence of several months, and when it was resumed in the fall the two tubes containing the cultures of A 3 and P 2 had become contaminated during frequent transplantations and the work had to be confined to the remaining three.

At first Pfeiffer's method was followed; one-half a platinum loop of an agar culture killed by heat was injected subcutaneously; five days after, the same dose was injected into the peritoneum and then, at intervals of five days each, two half-loopfuls of living bacilli were injected into the peritoneum. The animals were bled in twelve to fifteen days after the last injection, but the sera of all four (the fourth being the control, injected with typhoid bacilli), proved feebly agglutinative, the action ceasing after the dilution of 1-150 had been reached. One c.c. of a twenty-four-hour bouillon culture was then given by intraperitoneal injection, and after a week 2 c.c. and the animals bled a second time. The sera now agglutinated in dilutions of 1-800 or more as follows:

Control serum + Typh. b	1-1,000	+ 1-1,500
Control serum + A 1	1-1,000	+ 1-1,500
Control serum + A 2	1-1,000	+ 1-1,500
Control serum + P 1	1-1,000	+ 1-1,500
Serum A 1 + Typh. b	1- 800	+ 1-1,000
Serum A 1 + A 1	1-1,000	+ 1-1,500
Serum A 1 + A 2	1- 800	+ 1-1,000
Serum A 1 + P 1	1-1,000	+ 1-1,500
Serum A 2 + Typh. b	1- 800	+ 1-1,000
Serum A 2 + A 1	1-1,000	+ 1-1,500
Serum A 2 + A 2	1-2,000	+ 1-2,500
Serum A 2 + A 2	1-1,000	+ 1-1,500
Serum P 1 + Typh. b	1-2,000	+ 1-2,500
Serum P 1 + A 1	1-1,000	+ 1-1,500
Serum P 1 + A 2	1-1,000	+ 1-1,500
Serum P 1 + P 1	1-1,500	+ 1-2,000

The variations found in these agglutinative tests are no greater than may be observed if different strains of typhoid bacilli are tested with the same serum. For instance, a certain typhoid culture which had been in use for some months in the laboratory was agglutinated by the serum of the control animal only in a dilution of 1-800, but the serum of animal P 1 agglutinated it in a dilution of 1-1,200.

So far, therefore, as our present understanding of the question goes, the three organisms (if not the five) isolated from the legs and bodies of the flies which were caught in and around the privy vaults and yards of houses containing typhoid patients, have been proved to be true typhoid bacilli.

ALICE HAMILTON.

The Vienna Anglo-American Medical Association.

VIENNA, March 29, 1904.

To the Editor:—The Anglo-American Medical Association of Vienna was organized Feb. 6, 1904, with 56 members, and now has a membership of 80. The object of the organization, as stated in the constitution, is to promote social intercourse among the English-speaking medical men studying in Vienna, to advance the scientific interests of its members and to aid in quickly acquainting the newcomer with the medical and scientific courses given in Vienna.

The association meets every other Saturday evening for supper, after which there is a scientific and social meeting, the former consisting of an address on some medical topic by one of the professors or teachers connected with the university. Professors Ortner and Finger and Privata-Docent Sternberg have delivered very interesting and instructive addresses.

Inquiries addressed to the secretary, Dr. F. G. Harris, 8 Schlösselgasse No. 2, Vienna, will be cheerfully answered.

F. G. HARRIS.

[The officers of this organization were mentioned in THE JOURNAL, March 19, 1904, p. 779.—ED.]

Anesthol.

NEW YORK CITY, March 29, 1904.

To the Editor:—We beg to state that the use of the name of Dr. Willy Meyer of New York on the label of the new anesthetic anesthol was introduced without his knowledge, though in entire good faith on our part.

At his request the label has been changed and, in order to protect the medical profession against unreliable imitations, it will henceforth bear the name of Dr. Weidig, the originator of the new compound. CHAS. COOPER & Co.,

194 Worth St., New York, Sole Manufacturers.

Lehn & Fink, 120 William St., New York,
Sole Selling Agents.

Queries and Minor Notes.

ANONYMOUS COMMUNICATIONS will not be noticed. Queries for this column must be accompanied by the writer's name and address, but the request of the writer not to publish his name will be faithfully observed.

THE DOCTOR'S THREE FACES.

BROOKLYN, N. Y., March 31, 1904.

To the Editor:—Can you give me the verse in which occurs the reference to the three faces of the doctor; one when it looks like an angel's, one like a god's and the other like the devil's? R. T.

ANSWER.—Our correspondent probably refers to the epigram written by Hadrian Cordus, a physician of the early part of the Sixteenth century. It was in Latin as follows:

Tres medicus facies habet; unam quando rogatur.
Angelicum; mox est, cum juvet, ipse Deus.
Post ubi curato, poscit sua præmia, morbo
Horridus apparet; terribilisque Satan.

This is freely translated as follows:

Three faces has the doctor; when first sought,
An angel's—and a God's, the cure half wrought;
But when the cure completes he seeks his fee
The devil looks less terrible than he.

WHERE ARE WE AT?

A new avenue of usefulness in life has opened before the man who fails to make a success in some other way. We can not question the matter, since it comes with the authority and weight of New York and Boston literary culture behind it. In the *Boston Medical and Surgical Journal*, March 31, in an article on "The Partial Passing of Neurasthenia," by Dr. C. L. Dana, New York, occurs this sentence: "They (cases of dementia præcox) are seen in college men and young professional men who break down suddenly after starting out brilliantly and are never heard of, becoming perhaps, breadwinners and fathers and mothers of families, but never amounting to anything, and always working at a disadvantage."

REVOKING OF LICENSES.

DR. S. M. MASON, Clarksburg, W. Va., asks for information regarding the revoking of licenses by the medical boards of the different states for such causes as malpractice, immoral conduct or criminal practices.

Marriages.

EUGENE H. POOL, M.D., to Miss Esther Hoppin of New York City.

J. T. BRADBURY, M.D., to Miss Alerta Kissick, both of Cody, Wyo., April 4.

KELLOGG SPEED, M.D., to Miss Adelaide Brown, both of Chicago, April 12.

JOHN C. MCENERY, M.D., Jacksonville, Ill., to Miss Mary Milligan of Chicago.

PAUL LOUIS ERENS, M.D., to Miss Louise Castanedo, both of New Orleans, April 6.

OTTO BAUMGUCKER, M.D., to OTILIA OLGA ZELENY, M.D., both of Chicago, April 7.

CLARENCE HARCKER, M.D., Marshalltown, Iowa, to Miss Anna May Zeleny of Chicago April 7.

WALTER E. M. RANCHOUS, M.D., to Miss Bertha May Bushman, both of Columbus, Ohio, April 7.

JOHN NUTTALL, M.D., Newcastle, Ky., to Miss Anna Brinker of Wilmotte, Ill., at Hammond, Ind., April 8.

JACOB WEINER, M.D., Louisville, Ky., to Miss Ethelyn Mack of Kansas City, Mo., at Bardstown, Ky., March 28.

WILLIAM CALVIN KENNEDELL BERLIN, M.D., Cleveland, Ohio, to Miss Bessie Lee Koen of Mannington, W. Va., April 6.

Deaths.

Charles Gilbert Chaddock, M.D. University of Michigan, Ann Arbor, 1885; of St. Louis; a member of the American Medical Association, the American Medico-Psychological Association, and St. Louis Medical Society; fellow of the American Academy of Medicine; professor of nervous and mental diseases Marion-Sims-Beaumont Medical College, surgeon of the Seventh Michigan Volunteer Infantry during the Civil War, died at his winter home in Berkeley, Cal., April 1, aged 76.

Crawford E. Fritts, M.D. College of Physicians and Surgeons, New York, a member of the American Medical Association, New York State Medical Association, New York State Medical Society, visiting surgeon of Hudson City Hospital, consulting physician to the Hospital of the State House of Refuge for Women, died April 6 at his home in Hudson, N. Y., from neuralgia of the heart, aged 53.

John Higgins, M.D. Indiana Medical College, La Porte, Ind., 1846, during the Civil War surgeon of the Twelfth Illinois Volunteer Cavalry, and surgeon-in-charge of the General Hospital, Camp Stoneman, near Washington, D. C., died at his home in Crown Point, Ind., where he had practiced for 40 years, from apoplexy, April 6, aged 82.

Dennis Denman Loop, M.D. University of Buffalo, N. Y., 1864, of North East, Pa., sometime president of the Erie County Medical Society and of the Medical Society of Northwestern New York, and a member of the Medical Society of the State of Pennsylvania, died, April 2, from apoplexy, after an invalidism of six years, aged 76.

Judson Wade Garnett, M.D. College of Physicians and Surgeons, Baltimore, 1871, a member of the American Medical Association and North Texas Medical Association, and local surgeon for the M., K. & W. and St. L. & S. W. railways, died recently at his home in Greenville, Texas, aged 56.

Louis A. Crist, M.D. University of Pennsylvania, Philadelphia, 1896, a member of the Medical Society of the State of Pennsylvania and the Lackawanna County Medical Society, died at his home in Scranton, Pa., April 3, from pneumonia, after an illness of ten days, aged 33.

Douglas J. Cameron, M.D. University of Edinburgh, Scotland, of New York City, died in Phoenix, Ariz., March 14, aged 31. He practiced chiefly among the east side poor, and was commonly known as the "Good Samaritan."

Josiah C. Campbell, M.D. Howard University, Washington, D. C., 1877, formerly a member of the Vermont legislature, died at his home in Attleboro, Mass., March 24, from pneumonia, after a short illness, aged 60.

George G. Griffin, M.D. Jefferson Medical College, Philadelphia, 1850, a surgeon in the Confederate service during the Civil War, died at his home in Covington, Ga., April 4, after an illness of two weeks, aged 69.

Floyd F. Hollister, M.D. Syracuse University (N. Y.) College of Medicine, 1900, of Weedsport, N. Y., died, March 28, at

the home of his father in Mexico, N. Y., from influenza after an illness of one week.

John Albert Gray, M.D. University of Michigan, Ann Arbor, 1902, of Scottsville, Mich., died in Dallas, Texas, where he had gone in hope of regaining health, April 3, from pulmonary tuberculosis, aged 28.

Francis Rush Skinner, M.D. Castleton (Vt.) Medical College, 1854, the earliest resident physician of Eau Claire, Wis., who retired from practice in 1884, died at his home in Eau Claire, March 28, aged 72.

Charles M. Garrison, M.D. College of Physicians and Surgeons, New York, 1884, of Salt Lake City, state medical inspector, died in Salt Lake City from cerebral meningitis, March 26, aged 45.

Peleg Wadsworth, M.D. National Medical College, Washington, D.C., 1863, for many years city physician of Malden, Mass., died suddenly at his home in that place, April 2, from heart disease, aged 69.

Elisha Crowell, M.D. University of Pennsylvania, Philadelphia, 1851, who had practiced in West Philadelphia for 53 years, died at the home of his son in Philadelphia, April 5, aged 75.

Robert A. Warnock, M.D. University of Nashville, 1857, a surgeon in the Confederate service during the Civil War, died at his home in Inverness, Fla., from paralysis, January 30, aged 72.

John L. Gleason, M.D. Harvard University Medical School, Boston, 1866, of Hannibal, Mo., died at a sanitarium in St. Louis, March 30, from disease of the stomach of long standing, aged 68.

J. Carroll Mennemeier, M.D. University of Maryland, Baltimore, 1866, died at his home near Franklin, Baltimore County, April 6, aged 67. He was a member of the Maryland legislature in 1892.

John Philip Young, M.D. Medical Department of the University of Iowa, Keokuk, died suddenly at his home in Oakdale, Cal., March 14, from pulmonary hemorrhage, aged 61.

Atticus Grattan Whitehead, M.D., twice president of the Medical Association of Georgia, died at his home in Waynesboro, Ga., March 24, after a long illness, aged 63.

Addison W. Taylor, M.D. University of Pennsylvania, Philadelphia, 1871, died at his home in Beverly, N. J., April 3, from paralysis, after an illness of five weeks, aged 58.

Edward A. Walter, M.D. the University and Bellevue Hospital Medical College, New York, 1890, died at his home in New York City, February 27, from pneumonia.

Charles R. Sexton, M.D. Tulane University, New Orleans, 1875, died from pneumonia at his home in Birmingham, Ala., April 2, after an illness of three weeks, aged 58.

William H. Heller, M.D. Rush Medical College, Chicago, 1855, died recently at his home in Abingdon, Ill, aged 82. He was the oldest practitioner in Knox County.

Jacob B. Eagle, M.D. Indiana, 1897, of Lagrange, Ind., who was recently committed to Longcliff Asylum, Logansport, died in that institution recently, aged 66.

Henry G. Souder, M.D. Hahnemann Medical College, Philadelphia, 1875, died suddenly at his home in Woodstown, N. J., April 1, from apoplexy, aged 58.

T. T. Ferree, M.D. College of Physicians and Surgeons, Baltimore, died at his home in Asheboro, N. C., March 20, after a lingering illness, aged 52.

George H. Hammond, M.D. New York University, 1872, died at his home in Freeport, Long Island, N. Y., March 28, from pneumonia, aged 57.

William A. Eutravella McKee, M.D. University of Maryland, Baltimore, 1883, died at his home in New York City, March 28, from pneumonia.

A. Smith Mays, M.D. Eclectic Medical College of Pennsylvania, Philadelphia, 1875, died at Wharton, Ohio, March 29, from dropsy.

Jeremiah S. Hetrick, M.D. Washington University School of Medicine, Baltimore, 1873, died recently at his home in New Freedom, Pa.

Edson S. Munger, M.D. University of Vermont, Burlington, 1882, died at his home in Windsor, Vt., from pneumonia, March 29, aged 47.

Walters Burrows, M.D. College of Physicians and Surgeons, New York, retired, died at his home in Elizabeth, N. J., April 2, aged 75.

John D. Young, M.D. Penn Medical University, Philadelphia, 1864, died suddenly at his home in Winthrop, Mass., March 28, aged 62.

John S. Powell, M.D. Jefferson Medical College, Philadelphia, 1853, of Occoquan, Va., died at Alexandria, Va., March 12, aged 74.

James D. Archer, M.D. Starling Medical College, Columbus, Ohio, 1884, died at his home in Holgate, Ohio, February 26, aged 48.

Andrew J. Cunningham, M.D. Columbus (Ohio) Medical College, 1868, died at his home in Jasper, Mich., March 4, aged 54.

Robert Mackinlay, M.D. University of Edinburgh, Scotland, 1862, died at his home in Santa Barbara, Cal., February 26, aged 63.

William H. Latham, M.D., for 52 years a teacher of the deaf and dumb, died at his home in Indianapolis, April 5, aged 86.

H. F. Myers, M.D. Kentucky School of Medicine, Louisville, 1885, died at his home in Rosepine, La., March 7, aged 60.

Edward J. Fewtlus, M.D. Medical College of Virginia, Richmond, 1856, died at his home in Winterpock, Va., March 9.

Luther D. Scherer, M.D. Chicago Medical College, 1878, died at his home in Los Angeles, Cal., March 2, aged 57.

Vastine C. Luna, M.D. Rush Medical College, Chicago, 1896, died at his home in La Grange, Texas, March 5.

Felix Fottig, M.D. Detroit Medical College, 1877, died at his home in Detroit, Mich., March 11, aged 66.

Alfred B. Kibbe, M.D. University of Buffalo, 1860, died at his home in Seattle, Wash., March 27.

C. H. Roberts, M.D., died suddenly from heart disease at his home in Wolfe City, Texas, March 26.

James H. Bryant, M.D. Indiana, 1897, died at his home in Gentryville, Ind., March 22, aged 92.

Marion Lewis Mayo, M.D., late of Huntington, W. Va., died at Richmond, Va., April 6, aged 32.

William Mulherin, M.D., died of heart disease at the home of his father in Philadelphia, April 9.

Philip D. Carper, M.D. Iowa State University, died at Los Angeles, Cal., March 4, aged 41.

William D. Hill, M.D. Indiana, 1900, died at his home in Martinsville, Ind., March 22.

Linus Squires, M.D. Iowa, 1880, died recently at his home in Mitchell, Iowa, aged 72.

Joseph B. Frazier, M.D., died at his home in Baltimore, March 8.

Book Notice.

THE COMMONER DISEASES OF THE EYE. How to Detect and How to Treat Them. For Students of Medicine. With 250 Illustrations, Many of Them Original, of Which 7 are Colored Plates. By Casey A. Wood, C.M., M.D., D.C.L., Professor of Clinical Ophthalmology in the University of Illinois, and Thomas A. Woodruff, M.D., C.M., L.R.C.P. Lond., Professor of Ophthalmology in the Post Graduate Medical School, Chicago. Cloth. Pp. 490. Price, $1.75. Chicago: G. P. Engelhard & Co. 1904.

A better title for this book would have been "Ophthalmology for the General Practitioner," for this would have expressed exactly what it is. The authors have done more than to simply discuss the common diseases of the eye; they have given its anatomy and physiology, especially the latter, and the methods of examination, and in fact have treated the subject from the broad standpoint of the needs of the physician. The first three chapters are devoted to the examination of the eye and to errors of refraction and their correction. Then follow chapters on the common diseases of the eyelids, the conjunctiva, the cornea, the iris, the crystalline lens, etc. The chapter on "How to Preserve the Eyesight" is especially worthy of note. In it are considered the questions, at what age a child should be sent to school, the arrangement of school rooms, the color of window shades, arrangements of seats, blackboards, etc., from the standpoint of the pupil's eyesight. "Ophthalmology in General Medicine and Surgery," "The Ocular Complications of Certain Systemic Diseases," Headache, etc., from Eyestrain," and "Remedies in Ophthalmic Practice," are the subjects of other chapters, and indicate the practical scope of the work from the standpoint of the general practitioner. Every subject is discussed fully, yet while the book contains

nearly 500 pages, it is free from padding. It is scientific, but the matter is presented in such simple language, and in such an elementary manner, that even a layman could understand it. The book is well illustrated, and an unusually complete index adds to its value. On the whole, for the general practitioner, it is one of the most satisfactory books on the eye of which we know.

State Boards of Registration.

COMING EXAMINATIONS.

Illinois State Board of Health, Chicago, April 25-27, and East St. Louis, May 4-6. Secretary, J. A. Egan, Springfield.

Board of Medical Examiners for the State of Texas, Austin, April 21-23. Secretary, M. M. Smith, M.D., Austin.

State Board of Medical Examiners of Iowa, April 14-15 at Keokuk, April 20-21 at Des Moines, May 2-3 at Sioux City. Secretary, J. F. Kenkedy, M.D., Des Moines.

Nebraska State Board of Health, Lincoln, April 21-23. Secretary, Geo. H. Brash, M.D., Beatrice.

Nevada State Board of Medical Examiners, Carson City, May 2. Secretary, S. L. Lee, M.D., Carson City.

Louisiana State Board of Medical Examiners, Tulane Medical College, New Orleans, May 6-7. Secretary, F. A. Larue, M.D., New Orleans.

Mississippi State Board of Health, Jackson, May 10-11. Secretary, J. F. Hunter, M.D., Jackson.

State Board of Medical Examiners of South Carolina, State House, Columbia, May 17. Secretary, S. C. Baker, Sumter.

University of the State of New York, State Medical, Homeopathic and Eclectic Boards, New York, Albany, Buffalo and Syracuse, May 17-20.

Board of Medical Examiners of the State of North Carolina, Raleigh, May 18. Secretary, G. W. Pressly, Charlotte.

The Ohio State Board of Medical Examiners, will hold examinations at Cincinnati, Cleveland and Columbus this year, instead of at Columbus alone, as in the past. This will be a great accommodation to the 1904 graduating classes of Cincinnati, which are the first classes to be affected by the new law. The examinations will be held June 13, 14 and 15.

District of Columbia Report.—Dr. W. C. Woodward, secretary of the Board of Medical Supervisors of the District of Columbia, reports that at the examination held at Washington, D. C., Jan. 14-16, 1904, 80 questions were asked on 17 subjects, and a percentage of 75 was required. Of the 11 who were examined, 7 passed, 3 failed and 1 withdrew before the end of the examination. The latter graduated from Columbian University in 1903.

PASSED.

College.	Year Grad.	Per Cent.
Columbian University	(1903) 84.34, 75.07, 83.84,	80.71
Georgetown University	(1886) 75.71, (1903)	88.90
Johns Hopkins University	(1903)	90.15

FAILED.

Georgetown University	(1900)	68.65
Howard University	(1903)	68.62
Michigan University	(1879)	67.68

Oregon Report.—Dr. Byron E. Miller, secretary of the Board of Medical Examiners of Oregon, reports that at the written examination held at Portland, Jan. 5-7, 1904, 100 questions were asked on 15 subjects, and a percentage of 75 was required. Of the 21 who were examined 18 passed and 3 failed. One of the latter was not a graduate.

PASSED.

College.	Year Grad.	Per Cent.
Denver College of Medicine	(1901)	78.3
University Med. Coll. Kansas City	(1897) 76.8, (1902)	78.9
Cooper Med. Coll., San Francisco	(1903)	80.6, 85.5
College of P. and S., Keokuk, Iowa	(1880)	81.0
Harvard University, Boston	(1901)	80.9
University of Michigan	(1877) 79.3, (1903)	88.7
Omaha Medical College	(1897)	81.5
Medical School of Brunswick, Maine	(1901)	80.3
University of Minnesota	(1901)	80.3
McGill University, Montreal	(1875)	77.1
Syracuse, New York, Medical College	(1884)	82.2
New York University	(1880)	83.1
Marion-Sims Med. Coll., St. Louis	(1900)	80.4
Colorado School of Medicine	(1902)	82.5
Johns Hopkins University	(1903)	88.0

FAILED.

College of Physicians and Surgeons, Iowa	(1882)	73.3
College of Physicians and Surgeons, California	(1903)	73.3

Association News.

Atlantic City Hotels.

For a list of the hotels at Atlantic City and their prices, see THE JOURNAL, April 2, page 912.

Professor Ramsay of Scotland To Be a Guest of the Section on Ophthalmology at Atlantic City.

Dr. A. E. Bulson, Jr., Ft. Wayne, Ind., secretary of the Section on Ophthalmology, sends us the interesting news that Dr. A. Maitland Ramsay of Glasgow, Scotland, has accepted an invitation from the officers of that section to be a guest of the section at Atlantic City. He will deliver an address on "The Importance of General Therapeutics in the Treatment of Ocular Diseases."

The Public Service.

Army Changes.

Memorandum of changes of station and duties of medical officers, U. S. Army, week ending April 9, 1904:

Williamson, L. P., asst.-surgeon, assignment to duty as assistant to Major Richard W. Johnson, surgeon, in charge of Medical Exhibit, Louisiana Purchase Exposition, is revoked, and he will proceed at once from Jefferson Barracks, Mo., to St. Louis and report to Dr. W. P. Wilson, chairman Philippine Exhibit Board, to supervise sanitary matters in Philippine Village and care of sick connected with Philippine Exhibit.

De Witt, Wallace, asst.-surgeon, on completion of special duty at New Haven, Conn., will proceed to St. Louis and report for duty as assistant to Major Richard W. Johnson, surgeon, in charge of Medical Department Exhibit, for duty as his assistant.

Hutton, Paul C., assist surgeon, granted five months' leave on surgeon's certificate of disability. Availed himself of this leave April 1.

Van Poole, Gideon McD., asst.-surgeon, granted thirty days' leave, to take effect about April 6, 1904.

Many, Harry C., contract surgeon, granted leave of absence for two months, to take effect about June 1.

Bister, Ernest P., contract surgeon, granted leave of absence for twenty days, to take effect about April 16.

Navy Changes.

Changes in the medical corps, U. S. Navy, for the week ending April 9, 1904:

Taylor, H. C., asst.-surgeon, detached from the Naval Museum of Hygiene and Medical School, Washington, D. C., and ordered to the Naval Hospital, Naval Station, San Juan, P. R., sailing from New York about April 9.

Campbell, F. E., asst.-surgeon, detached from Naval Museum of Hygiene and Medical School, Washington, D. C., and ordered to the *Constellation*.

Manchester, J. D., asst.-surgeon, ordered to the *Columbia*, April 11.

Pease, T. N., asst.-surgeon, ordered to the *Hartford*, April 14.

Reeves, I. S. K., asst.-surgeon, ordered to the *Minneapolis*, April 14.

Wentworth, A. R., surgeon, granted leave of absence for one month from April 5.

Bishop, L. W., asst.-surgeon, detached from treatment at the Naval Hospital, Mare Island, Cal., ordered home and granted sick leave for two months.

Marine-Hospital Service.

Official list of the changes of station and duties of commissioned and non-commissioned officers of the Public Health and Marine-Hospital Service, for the seven days ended April 7, 1904:

Von Ezdorf, R. H., P. A. surgeon, detailed as recorder of board of examiners that met at Washington, D. C., April 4, 1904, for the examination of candidates for appointment as assistant surgeon.

Foster, M. H., P. A. surgeon, bureau letter of March 19 granting leave of absence for ten days from March 30, amended so that said leave shall be effective April 29.

Anderson, J. F., P. A. surgeon, relieved from duty as recorder of board of examiners that met at Washington, D. C., April 4, 1904, for the examination of candidates for appointment as assistant surgeon.

McClintic, T. B., asst.-surgeon, relieved from duty in the Hygienic Laboratory, Washington, D. C., and directed to proceed to Tampico, Mexico, for duty in the office of the United States Consul.

Glover, M. W., asst.-surgeon, to proceed to Vancouver, B. C., for special temporary duty.

Warren, B. S., asst.-surgeon, granted leave of absence for six days from April 10.

Moncure, J. A., A. A. surgeon, Department letter granting leave of absence for thirty days from April 1, 1904, amended so that said leave shall be effective from April 10.

BOARD CONVENED.

Board convened at Stapleton, N. Y., April 4, 1904, for the physical examination of officers of the Revenue-Cutter Service, detail for the board: P. A. Surgeon A. C. Smith, chairman; Asst.-Surgeon T. W. Salmon, recorder.

Health Reports.

The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon General, Public Health and Marine-Hospital Service, during the period from April 1 to April 9, 1904:

SMALLPOX—UNITED STATES.

Florida: Jacksonville, March 26-April 2, 1 case.
Illinois: March 26-April 2, Chicago, 6 cases; Danville, 6 cases.
Indiana: South Bend, March 26-April 2, 1 case.
Kentucky: Covington, March 26-April 2, 2 cases.
Louisiana: New Orleans, March 26-April 2, 4 cases, 2 imported.
Maryland: Baltimore, March 26-April 2, 4 cases.
Massachusetts: Lowell, March 26-April 2, 1 case.
Michigan: at Ft. Hamilton, March 19-26, present.
Missouri: St. Louis, March 26-April 2, 19 cases.
New York: March 26-April 2, Buffalo, 3; Niagara Falls, 1 case.
Ohio: Cleveland, March 26-April 1, 6 cases, 2 deaths; Dayton, March 26-April 2, 2 cases.
Pennsylvania: Philadelphia, March 24-31, 1 case; March 26-April 2, Erie, 2 cases; Philadelphia, 32 cases, 7 deaths; Pittsburg, 4 cases, 2 imported; Reading, March 26-April 4, 1 case.
South Carolina: Charleston, March 26-April 2, 2 cases; Greenville, March 19-26, 2 cases.
Tennessee: Nashville, March 26-April 2, 5 cases.
Virginia: Pocahontas, March 24-31, 6 cases, 2 deaths.
Wisconsin: Milwaukee, March 26-April 2, 3 cases.

SMALLPOX—FOREIGN.

Austria: Prague, March 6-12, 2 cases.
Belgium: Antwerp, March 12-19, 10 cases, 4 deaths.
Brazil: Rio de Janeiro, Feb. 28-March 6, 45 cases, 3 deaths.
Canada: Quebec, March 12-19, 1 case.
Colombia: Barranquilla, March 7-20, 3 deaths.
Formosa: Jan. 1-31, 9 cases.
France: Paris, March 12-19, 15 cases, 1 death.
Great Britain: March 12-19, Edinburgh, 8 cases, 1 death; Hull, 6 cases; Leith, 1 case; Manchester, 3 cases; Newcastle-on-Tyne, 7 cases; Nottingham, 13 cases; South Shields, 1 case; Glasgow, March 19-26, 46 cases, 4 deaths; Leeds, March 19-26, 2 cases; London, March 12-26, 94 cases; Sheffield, March 6-19, 3 cases.
India: Bombay, March 1-8, 19 deaths; Calcutta, Feb. 20-March 5, 77 deaths; Karachi, Feb. 28-March 6, 16 cases, 2 deaths.
Mexico: City of Mexico, March 13-20, 11 cases, 6 deaths; Vera Cruz, March 19-26, 1 case.
Netherlands: Amsterdam, March 19-26, 2 cases.
Russia: March 5-12, Moscow, 5 cases, 1 death; St. Petersburg, 10 cases, 1 death.
Straits Settlements: Singapore, Feb. 20-27, 1 death.
Turkey: Constantinople, March 13-20, 5 deaths.

YELLOW FEVER.

Brazil: Rio de Janeiro, Feb. 28-March 6, 9 cases.
Mexico: Merida, March 13-19, 1 case; Tehuantepec, March 19-26, 3 cases, 1 death.

CHOLERA.

India: Bombay, March 1-8, 1 death; Calcutta, Feb. 20-March 5, 77 deaths; Madras, Feb. 13-March 4, 7 deaths.
Turkey in Asia: Bassorah, Feb. 9-12, 6 cases, 4 deaths.

PLAGUE.

Africa: Port Elizabeth, Feb. 27-March 5, 8 cases, 4 deaths.
Australia: Brisbane, Feb. 6-20, 5 cases; Sydney, March 10, 1 case.
Brazil: Rio de Janeiro, Feb. 28-March 6, 1 case.
India: Bombay, March 1-8, 962 deaths; Calcutta, Feb. 20-March 5, 704 deaths; Karachi, Feb. 28-March 6, 106 cases, 90 deaths; Madras, Feb. 27-March 4, 1 death.
Peru: Lima, March 22-30, 23 cases 4 deaths.

Medical Organization.

Florida.

CITRUS COUNTY MEDICAL SOCIETY.—This society was organized at Inverness, April 4, on the standard plan, with the following officers: Dr. Joseph D. Bennett, Crystal River, president; Dr. James F. Miller, Inverness, vice-president; Dr. Henry O. Snow, Floral City, secretary-treasurer; Drs. R. A. Lowray, Floral City, Walter E. Armstrong, Crystal River, and Taylor, Crystal River, censors, and Dr. Joseph D. Bennett, Crystal River, delegate to the state association.

Illinois.

MENARD COUNTY MEDICAL SOCIETY.—A society has been organized at Petersburg with the following officers: Dr. Joseph W. Newcomer, Petersburg, president; Dr. Stith T. Hurst, Greenview, vice-president, and Dr. Berton W. Hole, Tallula, secretary.

Louisiana.

BOSSIER PARISH MEDICAL SOCIETY.—This society was organized on the standard plan in Shreveport, March 24, with an initial membership of 7, by Dr. Norwood K. Vance, Shreveport, councilor for the Fourth District. Dr. John L. Scales, Alden Bridge, was elected president; Dr. David J. McAnn, Atkins, vice president, and Dr. Clifford H. Irion, Benton, secretary-treasurer.

AVOYELLES PARISH MEDICAL SOCIETY.—Dr. Charles A. Gardiner, Bristol, councilor for the Seventh District, met the physicians of the parish at Bunkie, and assisted in the organization of a medical society on the standard plan, with a charter membership of 18, and the following officers: President, Dr. Cleophas J. Ducote, Cottonport; vice-president, Dr. William G. Branch, Bunkie; secretary, Dr. E. Stanley Matthews, Bunkie; treasurer, Dr. Emil Regard, Mansura, and chairman of committee on scientific work, Dr. David E. Davis, Bunkie.

Mississippi.

GOOD WORK IN MISSISSIPPI.—Dr. John F. Hunter, secretary of the State Board of Health, is receiving a number of very encouraging reports of the organization of county medical associations in affiliation with the state and national association. He says that the establishment of these organizations indicates a larger attendance at the annual meeting of the Mississippi Medical Association, to be held in Jackson, April 20, than for many years. Within the past few days the county medical societies have been established and officers chosen for the next year. Closer bonds between members of the medical profession in Mississippi will be established by the launching of these county societies, and the work of the state association greatly facilitated.

COVINGTON COUNTY MEDICAL SOCIETY.—Physicians of the county met at Collins, March 23, and organized a society with the following officers: Dr. Alexander Fairley, Mount Olive, president; Dr. W. N. Blount, Collins, vice-president, and Dr. Harvey F. Garrison, Seminary, secretary and treasurer.

NEWTON COUNTY MEDICAL ASSOCIATION.—At a special meeting held in Hickory, March 22, at which Dr. J. J. Haraldson, Forest, represented the state association, the county association voted to accept the standard plan of reorganization, and chose its president, Dr. G. H. McNeill, Newton, as delegate to the state association.

CLARKE-WAYNE COUNTY MEDICAL SOCIETY.—This society was organized at Quitman, March 22, with the following officers: Dr. William H. Boykin, State Line, president; Dr. William J. McNair, Quitman, vice-president, and Dr. J. M. Guthrie, Quitman, secretary and treasurer. Eleven physicians were present at the meeting.

WASHINGTON COUNTY MEDICAL SOCIETY.—This society was organized in Greenville, March 16, with the aid of Dr. Edward H. Martin, Clarksdale, councilor for the First District, with about twenty-five charter members. Dr. Jefferson D. Smythe, Greenville, called the meeting to order, and was made temporary chairman, and Dr. Andrew G. Payne, Greenville, was made temporary secretary. After the adoption of the constitution and by-laws the following officers were elected: President, Dr. Elbert A. Cheek, Arcola; vice-president, Dr. Owen W. Stone, Greenville; Dr. M. O. Shivers, Greenville, secretary and treasurer; Dr. Jefferson D. Smythe, Greenville, delegate to the state association, and Drs. Emmett C. Smythe, Greenville, Owen W. Stone, Greenville, and A. S. Lee, Dudley, censors.

New Mexico.

CHAVES COUNTY MEDICAL SOCIETY.—On March 7 this society was organized at Roswell with 14 members, including all save two of the physicians in the county. The constitution and by-laws for county medical societies prepared by the committee on organization of the American Medical Association was adopted and the following officers were elected: President, Dr. William T. Joyner; vice-president, Dr. John W. Kinsinger; secretary, Dr. William W. Phillips; treasurer, Matthews W. Flournoy, and censors, Drs. Charles M. Mayes, Charles I. Benson, and T. C. Blackwelder, all of Roswell. The society announces that it is ready to do its part in reorganizing the Territorial Medical Society.

Texas.

A TYPICAL LETTER FROM A GOOD COUNCILOR.—The following letter to Dr. J. N. McCormack, from a councilor in Texas, is a sample of those that have been received from the councilors in many states:

GREENVILLE, TEXAS, March 12, 1904.

Dear Dr. McCormack:—I have organized societies in 20 of the 22 counties in my district, taking in Haines County with Hunt. Only two counties remain out, and I will visit both of these this week.

I find nothing in the way of this plan of organization, when it is understood and the work placed in the hands of earnest, enthusiastic men. It has been easy for me to cheer the profession in my district that it marks an epoch in the history of organized medicine in this country. They are especially pleased with the feature of it which brings membership in the American Medical Association home to the county societies, so that every man's character is passed on by his home people.

I have found no case of strife or individual differences that the parties have not heard me willingly, and which has not yielded readily after mutual explanations. I have given 50 days of my time to this work since I met you at San Antonio. Time after time I have seen physicians meet, discuss and agree to go to work

under these plans of organization who had not spoken to each other for years. I have seen the good effect of breaking bread together this year as I have never seen it before.

I shall write to each county secretary in a few days to get a list of the new members since my last visit to them. We will have more than 600 members from my district before the next meeting of the state association. I have visited some of the counties two or three times, have written over 3,000 letters, and yet my expense account for railway fare and everything else has been less than $120. . . . Yours very truly,

C. B. CAMPBELL, M.D.,
Councilor No. 14, Northern District.

Wisconsin.

TREMPEALEAU AND JACKSON COUNTY MEDICAL ASSOCIATION.—Dr. Wilbur T. Sarles, Sparta, councilor of the Seventh District, recently met the physicians of these two adjoining counties at Galesville, and organized an inter-county association on the standard plan, with the following officers: Dr. George H. Hilderbilde, Arcadia, president; Dr. William E. Parker, Whitehall, vice-president; Dr. Henri A. Jagi, Galesville, secretary and treasurer, and Drs. George H. Lawrence, Galesville, W. E. McFarland, Trempealeau, and Judson A. Palmer, Arcadia, censors.

Society Proceedings.

COMING MEETINGS.

Medical Association of the State of Alabama, Mobile, April 19.
Medical Society of the State of California, Paso Robles, April 19-21.
Florida Medical Association, Live Oak, April 20.
Medical Association of Georgia, Macon, April 20.
Mississippi State Medical Association, Jackson, April 20.
Texas State Medical Association, Austin, April 26.
Medical and Chirurgical Faculty of Maryland, Baltimore, April 26-28.
Arizona Medical Association, Tucson, April 27-28.
Arkansas Medical Society, Texarkana, May 3-5.
Louisiana State Medical Society, Lafayette, May 3-5.
Nebraska State Medical Society, Omaha, May 3-5.
Kansas Medical Society, Topeka, May 5-7.

CHICAGO LARYNGOLOGICAL AND CHICAGO MEDICAL SOCIETIES.

Joint Meeting held March 9, 1904.

The President, Dr. John Edwin Rhodes, in the chair.

When to Operate and When Not to Operate on the Mastoid Bone.

DR. HENRY GRADLE read a paper with this title in which he reviewed the literature, and said that the reports contained therein teach, first, that suppuration of the middle ear, both acute and chronic, involves danger to life. Secondly, that even in the desperate cases reported greater success attends mastoid operations, although many of them must extend into the cranial cavity, and, thirdly, that properly timed surgical intervention would have prevented this serious extension of the disease.

In at least one-third of all instances acute mastoiditis subsides gradually after a climax of three or four days, provided there is free drainage from the middle ear. In chronic cases, a simple opening of the mastoid antrum, although often curative, is generally not the proper operation. In most cases a cure is obtained quicker and with greater certainty by the radical operation, which converts the antrum, the attic and the middle ear proper into one continuous and accessible space with exenteration of contents. A prompt radical operation is the only safe course in all instances in which irritative symptoms indicate active extension of the disease. This immediate indication is given in all chronic instances of otitic suppuration by persistent dizziness, pain or local tenderness, one-sided headache, or any symptoms suspicious of intracranial involvement.

Treatment of the Suppurative Diseases of the Accessory Sinuses of the Nose.

DR. E. FLETCHER INGALS read this paper. He said that in acute cases of suppuration of the antrum the patient should be kept quiet, the pain relieved by hot or cold compresses over the cheek, and the swelling and turgescence relieved by local applications in the region of the ostium maxillare. In chronic cases Christopher Heath recommends entering the antrum above the alveolus through the canine fossa; the tendency to closure being obviated by making an opening a centimeter or more in diameter. The radical operation consists of opening through the canine fossa and curetting thoroughly the lining of the antrum, removing at the same time any dead bone or obstructing septa.

Some cases with suppuration of the ethmoidal cells recover spontaneously, but most of them continue for many months, and even years, unless thoroughly treated. In acute cases relief may frequently be obtained by local medication that will reduce the swelling and thus allow the pent-up secretions to escape. Kiesr and Lapelle, in 364 autopsies on bodies dead from various diseases, found over 13 per cent. affected by suppuration of the sphenoidal sinus, which would indicate that the affection is very generally overlooked. On account of the dependent position of the ostium frontale and the direction of the canalis naso-frontalis, not a few patients affected with acute suppuration of the frontal sinus will recover spontaneously. In others the cure is much facilitated by local remedies which reduce the swelling, such as suprarenalin and cocain, which may be used several times daily, in the same manner as recommended for suppuration of the ethmoidal cells or for closure by swelling of the ostium maxillare, but in a considerable number of these cases the obstruction is due to nasal mucous polypi or to chronic thickening of the middle turbinated body, so that it will not be relieved in this manner. In such cases the polypi should be removed or the anterior end of the middle turbinated cut off, or both.

If the canal is completely closed, and in any case in which the disease does not yield within four or five months to treatment, it is probable that partial septa cause pus pockets in the frontal sinus, or that the walls of the cavity are much diseased. In these conditions a radical operation by an external opening through the anterior wall of the sinus is necessary.

The Symptoms and Diagnosis of the Suppurative Diseases of the Accessory Sinuses of the Nose.

DR. NORVAL H. PIERCE pointed out those symptoms which are common to suppurative disease of all the accessory sinuses, and followed the lines of description laid down by Hajek. Under local symptoms he discussed headache, neuralgias, secretion, etc. Under general symptoms he referred to fever, congestion and depression, nasal discharge, objective symptoms, and also spoke of atypical hypertrophies of the middle meatus, and dilatation of the maxillary sinus.

In speaking of the diagnosis reference was made to the value of transillumination. The symptoms of disease of the frontal sinus were detailed and its diagnosis discussed; also disease of the ethmoid cells, latent or closed empyema, open empyema, disease of the sphenoidal sinus, and, lastly, attention was directed to only one complication of sphenoidal empyema, namely, the extension of the inflammatory process to the orbit.

Miscellany.

MEXICO AND YELLOW FEVER.

The Yellow Fever Situation on the Mexican Border—What Is Being Done to Protect the United States.

The history of the epidemic of yellow fever which prevailed last fall in Laredo and other towns in southern Texas is detailed in the report of Surgeon G. M. Guiteras, of the Public Health and Marine-Hospital Service. This report shows the efficiency of our Public Health Service, and incidentally adds the weight of its testimony to the now scarcely contestable theory of the transmission of yellow fever solely by the mosquito.

Yellow fever appeared in Tampico, Mexico, in May, 1903, and from this starting point was carried along the line of the Mexican National Railway to Victoria, Linares, Monterey and other towns between Tampico and the Rio Grande. The quarantines established by the Mexican sanitary officials were perfunctory and inefficient, and the authorities in these infected Mexican towns persistently denied the existence of yellow fever, thus creating a sense of false security which greatly favored the rapid spread of the disease. There is strong evidence to show that the disease was introduced in Nuevo La-

redo from Victoria, Mexico, early in August. Inasmuch as the two Laredos are practically one town, and that the Plaza of Nuevo Laredo, Mexico, is a popular resort and is frequented daily by Americans from Laredo, Texas, the infection of the latter town could not have been long delayed.

The first cases in Laredo, Texas, probably appeared in the latter part of July or the first week in August. Laredo physicians, with one or two exceptions, were unacquainted with yellow fever and inclined to be skeptical of its existence. The large peon population of Laredo, made up of the lowest class of Mexicans, ignorant and superstitious, seldom called a physician because of fear of being quarantined or sent to a hospital. Hence these first cases went unrecognized, and, allowing the usual time for the mosquito cycle and period of incubation, the second group of cases, which must have appeared about the third or fourth week of August, also were not recognized, or at least were not reported.

The disease was not officially reported until the third week in September, and when the officers of the Public Health and Marine-Hospital Service, detailed for the suppression of the disease, arrived on the scene, September 25, a very serious condition of affairs confronted them. Cases of yellow fever were reported in rapid succession from widely separated points, this probably being the period of the third mosquito cycle of infection, showing that the disease had already obtained a firm foothold and was widely disseminated among a population almost entirely non-immune. Add to this an abundance of stegomyiæ, thousands of unscreened water tanks and other breeding places, and an entire lack of police or other authority to enforce sanitary measures, and some idea of the difficulties of the situation can be conceived. In addition, there was the extreme difficulty of preventing infected persons crossing from the Mexican side, where the Rio Grande was not only spanned by bridges, but had ferries and innumerable skiffs along its banks, and was also easily fordable at many points. There was always the possibility of infected mosquitoes being blown across the narrow river, as the prevailing winds, before the beginning of the northers, were from the south or southeast.

In spite of these discouraging conditions, the U. S. medical officers set to work, and while the time left before the coming of cold weather was too short to expect, under these conditions, the complete eradication of the disease, some remarkable results were accomplished. These results are best shown by comparing the statistics of the epidemic in the two Laredos—Nuevo Laredo, Mexico, and Laredo, Texas. In Nuevo Lafedo, Mexico, where very little anti-mosquito work was done, and that little attempted late in the season, 50 per cent. of the population contracted the disease. In Laredo, Texas, where, after the first of October, fever cases were screened, water tanks and other possible mosquito breeding places were oiled, and infected premises and surrounding abodes disinfected to kill mosquitoes, 1,050 cases developed in a population of over 10,000, constituting only about 10 per cent. of the population.

So thoroughly was the work of destroying mosquitoes, and especially the work of oiling containers and other breeding places performed, that an officer of the Public Health and Marine-Hospital Service, detailed in November to study infected yellow fever mosquitoes, could not find in Laredo, after diligent search, enough stegomyiæ in the adult, larval, or pupal stage to carry on his work.

To prevent a recrudescence of the epidemic of last year, it is necessary to clean up our towns in the vicinity of the danger line, and to induce the Mexicans to do the same in their territory. With these ends in view, the Public Health and Marine-Hospital Service has maintained throughout the winter in the towns on the Texas border an active prophylactic campaign directed toward destruction of mosquitoes and the elimination of breeding places. The surgeon-general also visited the City of Mexico in January and conferred with the president of the Superior Board of Health of Mexico. As a result of this conference, co-operation in the work of eradicating yellow fever has been promised by the Mexican health officials, and an excellent plan of campaign has been mapped out and inaugurated in the infected Mexican towns by Dr. Liceaga, president of the Superior Board of Health.

The force of medical officers along the Texas border has recently been increased, and these officers are now making house-to-house inspections in Laredo and other towns near enough to the infected territory to be in danger of infection. The city of Laredo has been divided into 30 sections and an inspector is assigned to each of these sections. Under this system daily inspection is possible, cisterns and water tanks are being oiled and covered, and where the residents are too poor to buy the necessary covering, it is furnished at the expense of the United States government. The city authorities of Laredo are actively assisting the officers in minimizing the possibility of a recurrence of the fever, by municipal ordinances which tend to improve sanitary conditions and strengthen sanitary control.

In his instructions to officers engaged in this work, as shown in a recent number of the *Public Health Reports*, the surgeon-general lays particular stress on the necessity of screening at once all cases of fever of whatever origin, and of maintaining this protection until the danger of infecting stegomyiæ is past.

Officers of the Public Health and Marine-Hospital Service have been stationed at Vera Cruz, Tampico, and other Mexican ports, who will keep in touch with local conditions and furnish valuable information to the bureau. The work of oiling and screening water tanks and destroying mosquitoes and their breeding places goes on without remission, and the health authorities of the state of Texas are giving the hearty co-operation and support which are necessary for success. On March 31 Dr. George R. Taber, state health officer of Texas, called a meeting of the health officers of the state at Austin, and resolutions were adopted to report promptly all cases of illness, and to maintain an active anti-mosquito campaign.

The vigilance of the Public Health and Marine-Hospital Service, the evidence of harmony between federal and state officers working for a common result, and the apparent sincerity of the Mexican health authorities in taking proper precautions in their towns, all make for a solution of the problem, and the real prevention of this preventable disease seems to be at least within the bounds of probability.

The Dose of a Trustworthy Drug Is "Enough."—It is often suggested that the physician must not cling too closely to the maximum and minimum doasge statements of the Pharmacopeia. The object of medication in any case is the achievement of some definite physiologic effect. The physician should be able to expect and secure a definite uniform result every time a medicinal agent is used—allowing for the conflict of intercurrent forces or of idiosyncrasy. Drugs or measures that can not be so used are still in the domain of empiricism or experimental medicine. They have their use and their place, but the physician should not add to their number by the misuse of drugs, by using impure preparations or by the administration of a crude drug when the effect desired is the result of one of the active principles that may be isolated. We agree with the editor of the *Alkaloidal Clinic*, who remarks that physicians should deem of greater importance than they do the securing of drugs of definitely known strength and of uniform physiologic results. On such a basis the physician may make deductions from his clinical experiences; without such a basis his path will be beset with discouragements and he will be in danger of the heresy of therapeutic nihilism. With such a drug, a remedy which he can trust to produce a certain effect, a physician should give it boldly until that result is produced.

Remote Results of Ventrofixation.—T. Dolbert analyzes the remote results in 79 cases in which ventrofixation was performed during the last six years at St. Petersburg clinics. (*St. Petersburg. med. Wochenschrift*, Vol. 28, No. 20, 1903.) In 43 it was done on account of retroversio-flexion, and in 36 for prolapse. The patients in the first group were mostly slender young women, generally undernourished, nulliparæ or primiparæ. In 3 the retroflexion was movable; 18 fixed, complicating some affection of the adnexa in 34, the latter being the main indication for operative intervention. The remote results establish that ventrofixation is no more dangerous nor liable to be followed by hernia than any other laparotomy. The uterus remains permanently in its new position. In only

one instance did it slip back again, and this was a much enlarged organ which should not have been fastened in this way. The fine objective results were not paralleled by the subjective, as the latter returned in more than a third of all the cases. This indicates that the neurosis apparently attributable to the displacement is in reality more or less independent of it, as is liable in all subjects with a tendency to neurasthenia or hysteria.

The Courage of the Surgeon in Emergencies.—In the *New York Times*, "a Boston physician" speaks thus of General Wood: "I remember an instance in direct proof of what I mean when I say that his successes are mainly due to his magnificent courage, his determination to do what he believes to be right, even in the face of certain punishment. In 1886, then a recent graduate from the Harvard Medical School, he was an interne at one of the Boston hospitals. An interne, I may say in explanation, is required by rule to send for the visiting surgeon in all cases requiring immediate operation, and is himself forbidden to do the work. One day an infant was brought in, suffering from membranous croup. The case was so far advanced that any delay would almost certainly result in death for the little one. Dr. Wood did not hesitate a moment. He began to work at once, carefully, fearlessly, promptly, and successfully. Five minutes later, and while both mother and patient were still in the room, the surgeon, who should have had the case according to rule, walked in. The young physician explained, but would not apologize, as he was asked to do. He had done right, and he was not going to tell any man he was sorry for it, he said. The result was that he was first suspended and then dismissed. And I call that courage."

Military Hygiene.—"The military authorities of India are exceedingly proud of the morale and the hygienic condition of their troops, and the records of the judge advocates and medical departments show a remarkable improvement in these respects, which is largely due to the scientific construction of the barracks, to the enforcement of discipline and regulations framed to suit climatic conditions, a better knowledge of the effect of food and drink, and the close observance of the laws of hygiene. The climate is very severe, particularly on Europeans, who must take good care of themselves or suffer the consequences. The death rate in all armies in time of peace should be much lower than in the ordinary community, because recruits are required to submit to physical examinations, and none but able-bodied men are enlisted. The death rate in the army of the United States before our soldiers were sent to the Philippines was remarkably low, only three or four per 1,000 per year. Some years ago in the army in India the mortality from disease was as high as sixty-nine per 1,000, but by the introduction of the reforms mentioned the rate had been reduced to nineteen per 1,000 in 1880, and for the last ten years has been less than sixteen per 1,000." The above, from the *Chicago Record Herald*, is in contrast to the reports about the French army. It is said that during 1903 50,000 cases of sickness occurred in the barracks of the French army. There were 3,500 deaths and 19,000 men were discharged because of physical disabilities. This very high rate is said to be due to the unsatisfactory state of the barracks in which the men live. According to the medical reports, only a very small part of the barracks had a proper allowance of air. Tuberculosis and typhoid are increasing with alarming rapidity. It is a noteworthy fact that the French army has only 1,500 physicians while the German army has 3,000.

Outbreaks of Sore Throat Due to Milk from Diseased Udders.—In England there have recently occurred outbreaks of sore throat due to milk obtained from cows with diseased udders. In an outbreak which occurred in Surrey the patients suffered from severe sore throat, with constitutional symptoms and enlargement of the cervical glands, which sometimes suppurated. The cases varied in severity. Ulcerated sore throat, follicular tonsillitis, and quinsy occurred. In several cases the cervical glands were markedly enlarged and they sometimes suppurated. In some cases after a few days pains in the joints occurred, which were possibly due to spread of the infection. Unlike an epidemic of diphtheria adults suffered in greater numbers than children. It was found that four of the cows in a herd which supplied the milk taken by the patients were suffering from mammitis and yielded pinkish-colored curdy milk, which in the case of two formed a layer resembling pus. Bacteriologic examination showed the presence of organisms—streptococci and staphylococci—similar to those usually associated with severe cases of sore throat and similar to those found in swabs taken from the throats of the patients. A noteworthy point was that external examination of the udders gave no indications of the condition such as would have been yielded by tuberculous udders. It was only on milking, the cows that the mammitis was discovered. In another outbreak of sore throat which took place at Finchley, a London suburb, very similar symptoms were observed. About 100 cases occurred. After an incubation period of about 24 hours the patients complained of sore throat, malaise and enlargement and tenderness of the cervical glands. The tonsils were frequently inflamed and sometimes suppurated. In some cases the posterior cervical and supraclavicular glands were enlarged. The complications were gland abscesses, cellulitis, and neuralgia. In a few cases a measly eruption was observed on the lower limbs. Two of the cows which supplied the milk were found to have contracted a chill, with the effect that their milk was curdled. It is suggested that the only way to prevent such outbreaks is regular and frequent veterinary inspection of milch cows.

The Small Medical Society.—The size of a medical society may indicate somewhat its strength and importance. From the standpoint of the society, growth is a good sign. The more members brought to join it, the wider its influence, the larger the number benefited by it. But from the standpoint of the individual member who goes into a medical society to learn something, or for the opportunity of seeing things from other men's points of view, the benefit is not at all proportioned to the size of the society. What any one of us can hear, does not depend on how many others are listening to the same speaker. What one can understand or what new ideas will be awakened in him, depends but little on how many others are present. In any well-conducted meeting, there can be but a single speaker at a time. For the purpose of the member who is learning anything, one speaker and one hearer constitute the active participants, even in the largest gatherings. In many respects the ideal conditions for learning exist only when there are but two present. So that there can be question and immediate answer, and the speaker's words can be addressed exactly to the thought of that particular hearer. One might wonder why any one should prefer to listen in a large medical gathering rather than in a small one. Of course, if one goes to a medical meeting solely for the benevolent purpose of instructing his fellow-members, or for the less benevolent purpose of advertising his skill in some specialty, or to hear himself talk, or to get his name in the papers, the larger the meeting he can get to listen to him the better. But the mass of those who go to medical meetings are listeners. Even of those who talk, fewer can do so in the larger meetings. This has led to the breaking up of the largest medical gatherings into "sections," and always with increased interest and benefit. In view of these facts there should be no hesitation about organizing a county medical society because its membership would be small. When physicians will not do so, or will not attend their county medical society because its meetings are small, they do not understand the value of contact with others of their profession. They do not realize that modern medicine has been built up by the contact of one mind with another. A vital difference between the physician and the quack is that one recognizes the importance of working with his fellows, while the other does not.—Edward Jackson in *Colorado Medicine*.

The anti-malarial operations in India, at Mian Mir, which were initiated by the members of the Royal Society's Malarial Commission to demonstrate that malarial fever can be prevented by destruction of the particular mosquito which is the definite host of the parasite, have been partly successful. Mian Mir was chosen as a very malarious station, and as one in which a marked reduction in the number of mosquitoes could be affected. The season of new infection begins in July, and the

number of new infections increase until October, when the maximum is attained. The *Anopheles culicifacies* is the chief, if not the only carrier of malaria. It breeds in the irrigation watercourses, which run more or less throughout the year. Only two forms of malarial parasite have been found—the benign tertian and the malignant tertian. A high percentage of children in the various bazaars are infected, and as they are not treated, form the chief source from which anopheles become infected. The prevalence of malaria is greatest near the breeding place. In April, 1902, operations were commenced. They consisted of destruction of the anopheles, removal of a number of infected persons from the breeding places, destruction of the parasites in infected persons by quinin, and administration of prophylactic doses of quinin to the troops. The operations against the mosquitoes were principally directed against the larvæ. They consisted in keeping the sides of the watercourses smooth and free from grass for many months, in lining one of the watercourses with brick and plastering it with cement, in drying out and cleansing each branch watercourse every ten days, and in pouring kerosene oil on the watercourses, and in filling in pools and emptying out water from the surface drains. Bricking in of the old watercourses was not successful in destroying the breeding grounds. To achieve this a very narrow channel had to be built in the bed of the old one to secure a swift running stream. In the hot season the oiling of pools had to be repeated at least every three days as the larvæ developed rapidly and the oil quickly evaporated. The *Anopheles culicifacies* appears to survive the Punjab winter solely by "hibernating larvæ." It was attempted during the winter to kill all such larvæ within a wide area. By the end of February, 1903, all larvæ had been killed within a radius of two miles, and no adult insects were present in the houses. Nevertheless, the number of adults present in the houses and the number of larvæ in the breeding places increased month by month to a maximum in October, and then quickly decreased, although operations were discontinued. It seems doubtful whether anything short of permanent extermination of all breeding places will produce a marked reduction. However, these experiments, which were carried out in the bazaars and military lines, prove that even a slight reduction affects the amount of malaria. The number of cases of malarial fever among the troops was the lowest on record.

Physical Culture.

Jay W. Seaver, M.D., of Yale University, president of the Chautauqua School of Physical Education and of the American Institute of Physical Culture, spoke before the physicians of Boston and vicinity, at the rooms of the institute, March 12. Dr. Seaver referred to exercise as being as necessary for health as sunlight, fresh air, and food; no healthy animal grows into vigorous maturity without performing many movements that are in themselves useless and unnecessary so far as accomplishing work is concerned; but the movements are taken from an innate restlessness that makes the young child play instead of rest. All play is founded on physical activity, and this activity becomes recreative, restful and helpful, according to the needs of the body.

Exercise is a therapeutic means that can not be ignored. For years attention has been given to what has been called medical gymnastics in the treatment of various forms of disease, and the method has gradually grown in the estimation of medical men until it is the chief agent used in treating many cases of deformity, malnutrition and nervous conditions.

Exercise may be looked upon from the esthetic standpoint, as a means of producing a more symmetrical and artistic physical development, but more especially in producing a graceful carriage and a control of the body. Emphasis, however, was laid on exercise as a developmental and therapeutic measure, a means of securing such strength and activity as is characteristic of health and ability to do the work of life. This is accomplished largely through the influence that exercise has on the nervous system, in giving it a normal outlet for the force that is generated in the brain; as it were, putting an implement in the hands of the brain for the accomplishing of its purpose; and, in the second place, it improves the circulation, so that each part of the body has its due amount of nutrition, and its waste material is swept away, so that the tissues are not poisoned by the products of ordinary wear and tear.

The problem of nutrition to-day is not so largely a matter of abundance of food as it is an economic use of food by the system, and this economy is carried out by adequate circulation that eliminates waste and overcomes local stagnation. Modern life has its decided tendency to limit the physical activities, and many of the ills that require the attention of physicians are due to the physical restraints that encumber life. The modern business man does not get his morning walk to his place of business, his communications with other business men are carried on over the telephone, and the brain in general attends to a multitude of details that in previous generations would have been mixed in with a large number of physical activities that would have reacted favorably on his general nutrition.

Therapeutics.

[Our readers are invited to send favorite prescriptions or outlines or treatment, such as have been tried and found useful, for publication in these columns. The writer's name must be attached, but it will be published or omitted as he may prefer. It is the aim of this department to aid the general practitioner by giving practical prescriptions and, in brief, methods of treatment for the diseases seen especially in every-day practice. Proper inquiries concerning general formulæ and outlines of treatment are answered in these columns without allusion to inquirer.]

Empyroform.

Skarlek, in *Amer. Med.*, recommends empyroform in the treatment of eczema to calm the itching and check the secretion. It can be used where tar can not be tolerated by the patient.

It may be combined as follows:

℞. Empyroform
Amyli, āā ..... ℥vi 24
Vaselini ..... ℥iss 45
M. Ft. unguentum. Sig.: Apply locally; or:
℞. Empyroform ..... ℥ss 15
Glycerini ..... ℥iss 10
Aq. destil. ..... ℥i 30
Alcoholis ..... ℥iss 10
M. For external use; or:
℞. Empyroform ..... ℥i-℥iss 4-10
Spts. chloroformi
Tinct. benzoini, āā ..... ℥i 60
M. Sig.: To be applied locally to the affected areas.

Dysmenorrhea.

The following combination is recommended to relieve the pain in dysmenorrhea:

℞. Dionin ..... gr. xv 1
Aq. laurocerasi ..... ℥i 30
M. Sig.: Thirty drops in water three or four times daily.

Tapeworm.

The following outline of treatment is recommended by C. Query in the treatment for the removal of tapeworm:

℞. Pepo (seeds) ..... ℥x 40
Ext. granati ..... ℥iss 10
M. Sig.: Divide into twenty parts and take five every half hour, after fasting for twenty-four hours. One-half hour after the last dose the following should be given:
℞. Tinct. jalapæ co.
Syr. frangulæ, āā ..... ℥vi 24
M. Sig.: At one dose.

Rheumatism in Children.

The diet and the digestive organs must be carefully observed in the treatment of rheumatic conditions in children, according to J. E. Winters in *Med. Rec.*. Calomel should be given, followed by rhubarb and soda. The latter should be continued as long as the tongue is furred. The dose of the

rhubarb should vary with the condition of the bowels. Soda should be given in twenty-grain doses before each meal. Milk should be the sole food as long as evident symptoms remain. The proteid of the milk contains no nucleïn, and yields no uric acid. It does contain potassium phosphate and citric acid.

Cereals must be eaten without sugar.

Sweets and animal broths, alcohol and sweets in adults are the bane of rheumatic patients.

Vegetable soups—pea, asparagus, celery, potato, bean, or tomato—are very nutritive. Animal broths or cereals are valuable, as adjuncts, to stimulate the appetite, and not for their food value. As soon as the symptoms of rheumatism have vanished, strained cereals, vegetable soups, baked potato, bread, green vegetables and fruit may be added to the diet. The failure in the dietetic management lies in the excessive use of broths and other animal food, sugar and sweet desserts, the use of alcohol, and the withdrawal of fruits and cereals.

Thrush.

Thrush, according to Illoway in *Med. News*, is a disease of filth and uncleanliness on the part of the mother or nurse, and is contracted through the bottle, breast or nipple, and the parasite is always introduced from without. In the lighter forms of thrush, where the epithelial layer has not been penetrated, sodium borate made up with honey into a paste and applied locally, is of value. The hyposulphite of soda is recommended by the author, on the basis that the parasite thrives only in an acid medium, as asserted by some authors. He combines it as follows:

R. Sodii hyposulph.	gr. xx	1 | 30
Aq. destil.	ʒv	30 |
Glycerini	ʒiii	12 |

M. Sig.: One teaspoonful every two hours, to be taken internally. And it should be applied locally with a camel's hair brush.

In the severer forms silver nitrate is recommended by some authors.

The following combination is also recommended as of great value as an antiseptic and astringent:

R. Zinci sulph.	gr. ii-v	12-.30
Aquæ rosæ	ʒii	60 |

M. Sig.: Apply locally.

A weak solution of the bichlorid of mercury in alcohol and applied with the finger is said to effect a cure after one or two applications. This, however, should be applied only by the physician.

Baginsky recommends the application of potassium permanganate topically in a 1 to 25 solution, and resorcin internally in solution of 1 to 100; one to four teaspoonfuls being given daily. The author places the greatest faith in the application of iodin combined as follows:

R. Tinct. iodi	ʒss	2 |
Glycerini	ʒiiiss	14 |

M. Sig.: Apply locally with a camel's hair brush pencil.

By this latter treatment the author states that the disease is completely eradicated within three or four days after the first treatment. He does not ascribe all the curative properties to the iodin, but regards glycerin as a very important factor. This treatment surpasses any treatment heretofore instituted; it is harmless and rapid in its action.

In cases where aphthæ occur in the mouths of adults the following combinations are of service:

R. Formalin	m. viii	50 |
Aq. camphoræ	ʒiii	90 |

M. Sig.: As a mouth wash; or:

R. Pot. chloratis	ʒss	2 |
Tinct. myrrhæ	m. xx	1 | 30
Elix. calisaya q. s. ad	ʒiii	90 |

M. Sig.: One teaspoonful in water every three hours.

Or as a local application:

R. Acidi salicylici	gr. x	65
Acidi borici	ʒss	2
Glycerini	ʒii	8
Aquæ q. s. ad	ʒii	60 |

M. Sig.: To be applied locally to the ulcers.

Anal Fissure.

Katzenstein, in *Merck's Archives*, gives the following outline of treatment in fissure of the anus: Anesthetize the nerve ends in the fissure by applying cocain and overcoming the spasmodic contraction of the sphincter with belladonna and disinfecting the parts by applying ichthyol, combined and applied as follows:

A piece of cotton is twisted into a cord about the size of a knitting needle and dipped into a solution composed of:

R. Ext. belladonnæ	gr. viii	50 |
Cocainæ hydrochlor.	gr. i	06 |
Ichthyol	ʒiss	6 |

M. Sig.: Insert the cotton in the rectum along the wall opposite the fissure, where it is left until expelled spontaneously. According to the author this application repeated twice a day will effect a cure within a week or two weeks.

Local Medication in Diseases of the Throat and Nose.

The following combinations are recommended by Ball in his "Dis. of Nose and Pharynx," as local antiseptic applications in the treatment of throat and nasal troubles:

R. Acidi carbol.	gr. iv	25
Aquæ calcis	ʒi	30 |

M. Sig.: As an antiseptic gargle in diphtheritic sore throat; or:

R. Liq. hydrarg. perchlor.		
Glycerini, āā	ʒi	4 |
Aquæ q. s. ad	ʒi	30 |

M. Sig.: As an antiseptic gargle; or:

R. Liq. potass. perman.	m. ii	12
Aquæ	ʒi	30 |

M. Ft. solutio. Sig.: To be used locally in the form of a gargle.

The following combination containing tannin may be used locally as a spray or gargle:

R. Acidi tannici	gr. x-xx	.65-1 | 20
Glycerini	ʒss-i	2-4 |
Aquæ	ʒi	30 |

M. Sig.: As a spray or gargle, or combined as follows:

R. Alumnis	gr. viii	50
Acidi tannici	gr. vi	40
Aquæ q. s. ad	ʒi	30 |

M. Sig.: As a local application.

In inflammatory, ulcerative and diphtheritic sore throats the following combination is recommended by the author:

R. Tinct. iodi	gtt. liss	15 |
Sodii chloridi	gr. v	.30
Aquæ	ʒi	30 |

M. Sig.: As a gargle, to be repeated several times through the day.

In chronic pharyngitis the following is recommended:

R. Iodi	gr. x	65
Potass. iodidi	gr. xx	1 | 30
Glycerini	ʒi	30 |

M. Sig.: To be applied locally on a swab.

About three minims of the oil of peppermint may be added to the foregoing if an anesthetic effect on the mucous membrane is desired.

In the treatment of ozena the following is recommended:

R. Thymol	gr. ss-i	.03-.06
Spts. vini rect.		
Glycerini, āā	ʒss	2 |
Aquæ q. s. ad	ʒi	30 |

M. Sig.: To be used as a stimulating spray.

As an insufflation to be used in chronic rhinitis and nasopharyngitis the following is of service:

R. Acidi tannici	gr. x	65
Pulv. camphoræ	ʒi	4 |
Pulv. amyli q. s. ad	ʒi	30 |

M. Sig.: To be insufflated two or three times daily.

A stimulating powder, recommended in atrophic rhinitis and some of the forms of chronic rhinitis, may be composed as follows:

R. Acidi salicylici	ʒi	4 |
Magnesiæ ponderosæ	ʒi	30 |

M. Sig: To be used in the form of an insufflation.

Quinin Subcutaneously.

The following combination containing quinin is recommended by Aufrecht, administered hypodermically:

℞. Quin. hydrochlor.	gr. viiss	50
Urethani	gr. iv	25
Aquæ destil.	℥i	4

M. Sig.: At one dose hypodermically.

The urethane, according to the author, increases the solubility of the quinin and consequently lessens the quantity of fluid necessary to hold the quinin in solution.

[Urethane is an ethyl ether of carbamic acid obtained by heating a salt of urea with ethyl alcohol.]

Erosions of Cervix Uteri.

According to an abstract in the *N. Y. and Phil. Med. Jour.*, Lutaud recommends the following combination as a local application in the treatment of simple erosions of the cervix accompanied by slight inflammatory changes:

℞. Tinct. iodi	℥ss	15
Morph. hydrochlor.	gr. x	65

M. Sig.: Apply to the cervix with a small brush every second day, tamponing in the meantime with cotton.

Small ulcers may be touched with a stick of silver nitrate. If large or chronic and co-existing with endometritis and leucorrhea, the following powder should be applied locally:

℞. Iodoformi	ʒx	40
Acidi salicylici		
Bismuthi subnit., aa	℥iiss	10
Camphoræ	gr. lxxv	5

M. Sig.: Apply with an insufflator, followed by a tampon. The camphor is used to mask the odor of the iodoform.

If gonorrhea is suspected, wash the surface of the ulcer with hot water and apply the following:

℞. Fuchsin	℥iiss	10
Alcoholis		
Aquæ, aa	℥ii	60

M. To be painted over the ulcers.

A tampon should be subsequently inserted, consisting of iodoform gauze and permitted to remain for twenty-four hours. If a fetid discharge appears, inject potassium permanganate 1 to 5,000 solution.

Medicolegal.

Not Evidence of Insanity.—The Supreme Court of Idaho holds, in the case of Curtis vs. Kirkpatrick, that the fact that one is a believer in spiritualism, and makes many statements apparently unreasonable, is not evidence of insanity.

Act as to Manufacture of Clothing Valid as Health Law.—The Court of Appeals of Maryland, in the case of State vs. Hyman, holds constitutional, as a health measure, the legislation of 1902 regulating the manufacture in tenement and dwelling houses of wearing apparel intended for sale. It says it supposes that it is a matter of fact of which a court may take judicial notice that the manufacture of wearing apparel in improperly ventilated, unsanitary and overcrowded apartments will likely promote the spread of, if it does not engender, disease, and it is obviously within the police power of the state to regulate the number of persons who may be employed in any tenement or other establishment where this manufacture is carried on, so that the public health may be conserved. Again, referring to a statutory provision that at least 400 cubic feet of clear space should be allowed in each room for each occupant in manufacturing establishments, and that a permit be secured setting forth the number of persons allowed to be employed in each room, the court says that it certainly requires no discussion to show that such a regulation is strictly and essentially a health regulation.

Trial Too Soon After Surgical Operation.—The Supreme Court of New Jersey says that, in the personal injury case of Searles vs. the Elizabeth, Plainfield & Central Jersey Railway Co., the company sought a new trial on the ground of excessive damages. If the disability resulting from the injuries was likely to be permanent, the damages would not be regarded as so excessive as to warrant an interference with the verdict, which awarded to the wife $12,000 damages, and to the husband $3,000, for injuries to the former, who sustained severe bruises of the head, limbs and spinal column. But it appearing that the trial was brought on so soon after a surgical operation on the patient, namely, a couple of days over a month after the removal by an incision of the coccyx, that sufficient time had not elapsed to enable the physicians to determine as to whether the operation would result in her complete or partial recovery—a result which they regarded, however, as highly probable—and it thereby appearing that justice had not been done by the verdict, it was held that, in the exercise of its sound discretion, it became the duty of the reviewing court to set aside the verdict and grant a new trial.

Death from Poison Taken for Coercion or in Experiment.—The Supreme Court of Michigan says of the case of Courtemanche vs. Supreme Court of the Independent Order of Foresters that it was a peculiar one. Perhaps none could arise where the act of the deceased (if the defendant's claim was true that his death was due to the voluntary taking of carbolic acid, not with the intent of causing death, but to frighten his wife into giving him money) could present a more pusillanimous act. But it holds that such act would not prevent a recovery of benefit insurance by the widow, though the certificate stated that it did not include assurance against self-destruction or suicide. Perhaps, it says, the word "culpability" is a proper one to use if not enlarged to include negligence, in which no moral question is involved, but it thinks such a question would be more appropriately raised under a provision excepting cases of death caused while engaged in an unlawful act—a provision found in most policies, and regarding which the authorities are numerous. It was urged that a policy which in express terms should contemplate and provide insurance against the danger resulting from the voluntary taking a chance of death, as in this case, would be void, as opposed to public policy. The court answers that, if the proofs showed that this was an experiment to determine whether death would follow the taking of the drug, showing that the contingency of death was not overlooked, it is possible that it might be justified in saying that such act, if followed by death, was not within the intent of the parties to the contract; but there was nothing in this case to indicate a design to take life, or that deceased thought that he was courting danger of death.

Dying Declarations Not Altered by Call for Relief.—In Hawkins vs. State, where the Court of Appeals of Maryland affirms a conviction of manslaughter by an abortion, an exception was taken to the admission of certain declarations on account of the testimony of a physician that when he was called in the declarant said: "Oh, doctor, I am dying. I want you to relieve me." It was argued that this was rather a cry for help than the utterance of an abandonment of hope. Again, it was said that she continued to repeat she was dying, and that he must help her—must relieve her in some way. But the court says that to assume, in the face of all testimony in the case, that her cry for relief disproved the sincerity of her statement that she knew she was dying, would be to deny to her the privilege of asking the alleviation of what the doctor said he knew as soon as he saw her was intense agony. Nor, the court continues, was it a natural or reasonable conclusion that the doctor did not think death impending because he gave her a hypodermic injection, and told her she would be relieved in a little while. This injection was plainly given to relieve the agony, and it is common knowledge that such treatment does mercifully render suffering or dying persons insensible to pain. The relief the doctor promised was what she asked—a respite from agony, not an escape from death. And it must not be forgotten that it is not material the physician may think the patient may or will recover if the latter fully believes death is actually impending. The court says further that it can not adopt the view of the Kentucky court in Matherly vs. Commonwealth, 19 S. W. Rep. 977, that

the desire to have a physician sent for clearly indicates in any case that the deceased had hope of living, though he said he was going to die. This inference must be controlled by all the circumstances of the case.

Current Medical Literature.

AMERICAN.

Titles marked with an asterisk (*) are abstracted below.

American Medicine, Philadelphia.

April 2.

1 *Fifteen Years' Experience with Uterine Fibroids. Willis E. Ford.
2 *Electricity in Medicine. James J. Walsh.
3 Preliminary Report of a Series of Metabolism Observations Made in Atrophic Arthritis, Hypertrophic Arthritis, Osteitis Deformans, and the Normal. (To be concluded.) Joel E. Goldthwait, Charles F. Painter and Robert B. Osgood.
4 *Sarcoma of the Nasal Passages. An Inductive Study Based on the Records of 150 Cases. J. A. Watson.
5 Toxemia Associated with Tuberculosis of the Cervical Lymphatic Glands, with Report of a Case. Arthur W. Elting.
6 Acquired Hydrophthalmus. Edward Stieren.
7 Use and Abuse of the Imagination in the Experiments and Observations in Medicine. John C. Hemmeter.

1. Uterine Fibroids.—Commencing with the history of the surgery of fibroids, Ford relates his own experience. The total number of cases he has treated and of which he has been able to ascertain the subsequent histories has been 162. Of this number 96 were treated by galvanism; 26 were improved as regards hemorrhages; pain, etc., and 7 recovered. Some few of the above improved relapsed. Twenty-five patients were improved, that is, the tumor became smaller, and in only one case was there any accident or injury from the use of the heavy current of electricity. Of the 31 cases treated by tying the uterine arteries through the vagina and by curettement, together with medicinal treatment by ergot, thyroid, etc., 24 were temporarily improved and 7 unimproved, though in the improved cases the tumors were not appreciably diminished in size. He thinks the method of tying the arteries is not advisable. The number of cases operated on was 61. Six of these were by abdominal section and external treatment of the stump; 2 died. In one case the patient died from cerebral apoplexy, which she had suffered from previously, the other had a very large tumor, the fibroid sloughed and death was due to septicemia. Since then all his abdominal operations have been done by supravaginal amputation after Baer's method, with 4 deaths in 34 operations. By vaginal hysterectomy he has removed 10 with one death. The number of operations was rather larger than would be the case ordinarily, and he thinks there are many cases in which operation is not called for, and quotes Hirst in respect to the indications for operation. He thinks that fibroids have a definite period of growth, though not according to any well-understood rule. In many cases they disappear. His rule now is to operate and remove any fibroid that is threatening life by hemorrhage, any soft, rapidly-growing myomas, any very large tumor causing pressure on the adjacent organs so as to produce invalidism, and any tumor which seems to be undergoing degenerative change. Many small fibroids have remained stationary under his observation for 15 years. A few tumors have disappeared without his knowing the cause. While no treatment other than surgical is of much service, if it is declined then galvanism will do more than any other method.

2. Electricity in Medicine.—Walsh apparently thinks that electricity is over-estimated, and that much of its effect is due to mental suggestion, yet there are certain results, such as an increase of blood pressure from static electricity, which may produce great improvement, and the relief of neuralgia by the Roentgen ray treatment, etc. He believes that we are only on the threshold of our knowledge in regard to radioactivity. It may yet bring us physical remedies as powerful as the chemical substances which we have used empirically.

4. Sarcoma of the Nasal Passages.—Watson finds from an analysis of 150 cases, so far as it goes, that there seems to be a greater liability to nasal sarcoma in the fifth decade than at other periods. Otherwise age seems to have little effect. Males are much more commonly affected than females. He thinks that it is not at all improbable that sarcoma arises from malignant transformation of nasal polypi, and gives his arguments for this view. Stenosis is necessarily the most common symptom. Spontaneous hemorrhage is next. Pain is mentioned but twenty-four times in the records of the series, though he thinks it is much more frequent than this. When it occurs it may vary in type and location. Commonly it is referred directly to the growth, but is sometimes widely radiated. Offensive discharge and external deformity add to the inconveniences. Serious impairment of the general health is often postponed until late. He discusses the diagnosis, and remarks that it is probable that sarcoma of this region is less malignant than that occurring elsewhere. The occurrence of metastasis is extremely rare; he has found it mentioned but three times. The average duration of life in the fatal cases appears to be about two years from the first appearance of the symptoms. Outside of surgery the only hopeful treatment is that by toxins, either of *Streptococcus erysipelatis* or Coley's fluid. He is convinced that the restriction of the growth in his own third case was due to the attacks of erysipelas. In 64 cases treated by intranasal operation, the percentage of recoveries was 54.68, and he thinks that this proportion indicates the propriety of the adoption of the milder operative measures in selected instances, at least. There is little justification, he holds, in the objection on account of the possibility of exciting the growth to greater malignancy. In any event there can certainly be no justification for primary external operation on small pedunculated sarcoma in an easily accessible region.

Medical Record, New York.

April 2.

8 *Hip and Thigh Amputations for Sarcoma of the Femur. George F. Shrady.
9 *Diagnosis of Thoracic Aneurism. Charles E. Nammack.
10 *Modern Treatment of Dacryocystitis. Alfred Wiener.
11 *Thymic Tracheostenosis with Report of a Fatal Case. William W. Carter.
12 The Kollmann Five-glass Test. George T. Mundorff.
13 Antistreptococcic Serum in the Treatment of Smallpox. Alfred C. Smith.
14 Importance of Treatment in the Early Stages of Arterial Degeneration. Louis F. Bishop.
15 Five Laparotomies on One Patient. Howard Crutcher.
16 Our Rural Water Supplies. A Word for the Thoughtful. Harvey R. Basbore.
17 A Radiographic Surprise. W. I. LeFevre.

8. Sarcoma of the Femur.—Shrady reports a case of amputation for sarcoma of the femur which, on account of the patient's objections, was not performed at the hip-joint, but as near to that point as was safe without sacrificing the joint. The patient has remained well for over twenty-one years. He remarks from this case and from other facts that, considering the small number of recoveries altogether, this speaks well for the possibility of suspending the extreme operation in some selected cases. There are few objections, he says, to thigh amputation, which do not apply to complete removal of the femur, and while he does not oppose hip disarticulation for sarcoma on general principles, he is still inclined to think that in some cases simple thigh operations may succeed, as in the case reported.

9. Thoracic Aneurism.—Nammack describes the symptoms of thoracic aneurism and remarks that while sometimes the diagnosis is easy, in other cases it may be exceedingly indefinite and obscure. It is determined by the recognition of the causative conditions, the symptoms and physical examination, not assuming the existence of aneurism in the absence of expansile pulsation. Aneurism of the ascending aorta gives better physical signs than that of the descending portion. Aspiration may be required in some cases. The value of the *x*-ray in diagnosis is considerable. The condition, he thinks, is not as rare as has been considered in the past. He enumerates other thoracic conditions which may give rise to confusion, such as solid intrathoracic growths, carcinoma, mediastinal abscess or tumor and pulsating empyema. Other conditions such as aortic regurgitation with dilatation of arch, aortic stenosis, and cardiac hypertrophy may be differentiated by careful reading of the physical signs. It is a mistaken notion in clinical medicine that aneurism will furnish an invariable thrill and mur-

mur. While the prognosis is bad, cure may occur from obliteration of the sac by coagulation of the blood, and the aim of treatment is to secure this by retarding the circulation and lowering the blood pressure. Absolute rest in bed, restriction of food and drink and the use of iodids in fair but not large doses will accomplish all that can be done.

10. Dacrocystitis.—Wiener pleads for more radical operation in this condition—extirpation of the sac. He thinks the after-effects have everything in favor of extirpation and nothing against it; it has the advantage of destroying the source of infection and is in experienced hands a simple procedure. The indications are long-continued suppuration, chronic blenorrhea of the sac, chronic catarrh of the sac, with an organic stricture, disease of the bone with caries, and blennorrhea, and in relatively recent cases, with ulcus serpens or when an operation for cataract or glaucoma is contemplated or in fresh injuries of the cornea and in tuberculosis of the sac. He thinks this operation is growing in favor among continental surgeons.

11. Thymic Tracheostenosis.—This term is used as differentiating the condition caused by pressure of a hypertrophied thymus on the trachea, from an enlargement of the gland downward, interfering with the circulation. Carter reports a case which leads him to make the following observations and suggestions:

1. In all cases of laryngeal stridor it should be determined whether or not the thymus is enlarged.
2. On account of surgical shock being badly borne by infants, and especially those in this condition, if the symptoms are not urgent, postural treatment should be tried, and if, in any position of the head and neck, relief is afforded, that position should be maintained by suitable apparatus until Nature has effected a cure by enlargement of the thorax, strengthening the tracheal rings, and diminution in the size of the gland.
3. Intubation, tracheotomy and artificial respiration do no good.
4. The surgical procedure of opening the mediastinum, bringing forward the gland and stitching it to the tissue over the sternum, should be performed immediately if there is danger from asphyxia.

Medical News, New York.

April 2.

18 *Specific Therapy of Tuberculosis and Vaccination Against the Disease. Eduardo Maragliano.
19 *Treatment of Neurasthenia. Howell T. Pershing.
20 Abdominal Ascites with 150 Tappings. E. K. Broad.
21 *Home Treatment of the Tuberculous "Is Just As Good"—But It Is Not. Henry Levien.
22 *Importance of Dropsy as a Symptom. A. C. Morgan.

18. Tuberculosis.—This article is noticed editorially and in the news department last week.

19.—This article appeared elsewhere. See THE JOURNAL of February 20, 1904, p. 558.

21. Tuberculosis.—Levien criticises the home treatment of tuberculosis, which he thinks fails through lack of proper hygienic control, the indulgence of friends and the want of facilities to meet the conditions. He reports two cases, which he thinks illustrate its failure. It is our duty, he says, to have the public impressed with the importance of fresh air, nourishing food, and above all of rigid supervision by physicians and nurses. These needs are best met by establishing sanatoria in sufficient number to supply the demands. The home treatment as a treatment is meaningless and a step backward, and may prove a menace to consumptives and mislead the public mind in believing it to be a new treatment.

22. Dropsy.—Morgan points out the importance of dropsy as a symptom, the cause of which, he thinks, must always be sought for and removed.

New York Medical Journal.

April 2.

23 *Critical Review of Some of the Recent Literature of Tuberculosis. Jonathan Wright.
24 *When Should the Tuberculous Patient Be Sent from Home? C. P. Ambler.
25 Laboratory Diagnosis. (To be continued.) M. P. Overholser.
26 Skiagraphic Errors; Their Causes, Dangers and Prevention. (Continued.) Lewis G. Cole.
27 Case of Infection with the Bacillus Aerogenes Capsulatus. S. W. Sappington.
28 Some Drug and Alcoholic Habitués. Samuel B. Lyon.

23. Tuberculosis.—Wright's paper is largely a review of Behring's theories, which are criticised in some detail. He thinks that Behring minimizes heredity too much, and that the majority of patients with phthisis will be found to have phthisical ancestors.

24. Tuberculosis.—Ambler discusses the climatic and sanatorium treatment of tuberculosis. He thinks the congregation of a number of patients in a sanatorium or carefully conducted boarding-house is preferable to allowing them to go to houses where hygienic regulations are not sufficiently considered. The advantages of change of climate may be summed up in better nutrition. The patient should endeavor to remain in the region where the improvement has occurred, and months should elapse after all signs of the disease have subsided before he returns to his own home.

Boston Medical and Surgical Journal.

March 17.

29 *Forcible Correction in Lateral Curvature of the Spine. Fourth paper. Robert W. Lovett.
30 *Hydrotherapeutic Prescriptions. Joseph H. Pratt.
31 An Account of the Work, Including Obstetrical Technic, at the Lying-in Hospital of the City of New York. Charles H. Bradley.

29. Lateral Curvature of the Spine.—Lovett criticises the methods that have been adopted, showing their disadvantages, and claims that the best chance for improvement in cases of severe scoliosis seems to be first, in the use of severe force to secure an improved and, if possible, over-corrected position temporarily and, second, to retain as much as possible the position thus secured during some part of the growing period. For this purpose a high degree of force is required. He deals with the subject theoretically, and describes the apparatus which has been constructed by Dr. E. B. Adams of the Boston City Hospital. It consists of a strong oblong frame fitted with a movable cross-bar, holding clamps for the pelvis, and a series of three rings, likewise movable, at the poles of which are inserted screws by which great pressure can be exerted on the different points as desired. He illustrates the apparatus, and its effects on the patients, claiming the following advantages:

1. The most economical use possible is made of the corrective force by applying it sideways, and thus less force is required or the same amount of force will do more than in extension of the spine. 2. The force is applied to the spine while slack and not made tense by extension. 3. Side correction is made by one part of the appliance. 4. Correction of rotation is made by another part of the appliance. 5. The pelvis is held in a position which ensures some flattening of the lumbar curve, which in the upright position tends on account of the balance of the patient to bring about straightening of the dorsal curve. 6. Finally, it may be said that general pathologic considerations would seem to indicate that retention in the corrected position should induce changes in the shape and relations of the misshapen bones.

30. Hydrotherapeutic Prescriptions.—Pratt reviews the uses of hydrotherapy in the different forms of disease, and concludes with a series of some thirty-five methods of its application.

Cincinnati Lancet-Clinic.

April 2.

32 *Uses of the Gastrodiaphane in the Diagnosis of Certain Gastric and Abdominal Affections. Frank L. Rattermann.
33 Some Few Observations on Hamlet—Was He Sane or Insane? If Insane, Was He Responsible? A. N. Ellis.

32. The Gastrodiaphane.—Rattermann gives the history of the invention of the gastrodiaphane and the methods of its use. He thinks it is not more difficult for the patient to swallow than the ordinary stomach tube. It works best in lean persons. The operator should pass an ordinary stomach tube for several days to a week prior in order to accustom the pharynx to the sensation which is at first produced. In case of gastric ulcer the instrument should be used with caution, and never when blood has been vomited or passed by the bowels within a few weeks. It should never be used in severe cases of heart disease or chronic bronchitis, in the aged or very weak, or in any advanced cases of tuberculosis or immediately after hemorrhage from any internal organ. Six weeks at least should elapse before any attempt at gastrodiaphany. The light should not be burned continuously; it is well to cut it off and allow the lamp to cool. He contradicts Kuttner and Einhorn's assertion that the lamp never becomes too hot as not agreeing with his experience. The method can be practiced with the patient in either an upright or horizontal position. A dark room is not necessary, though preferable. It is not necessary to have the stomach completely empty. The size of the picture depends on the amount of water in the stomach. The shadow view on the abdomen moves upward and downward as the lamp is pushed down into the stomach. The picture during respira-

tion moves upward and downward on the abdominal wall as the result of the connection of the stomach with the diaphragm. He finds that one is enabled not only to recognize the transverse colon by the dark shadow line lying below the greater curvature of the stomach, but likewise the dark shadow of the liver above and to the right side, and even, under favorable circumstances, those of projections, as tumors, gall bladder or dislocated spleen, etc. Frequently the recti muscles produce certain shadows on the picture, and it has been noticed that the view darkens and brightens with each pulsation of the heart. He claims that the gastrodiaphane under favorable conditions can be of valuable service in differential diagnosis of certain tumors of the gall bladder and carcinoma of the pylorus or a completely descended kidney fixed by adhesions and on a level with a normally located pylorus, pyloric carcinomas, or a dislocated spleen or tumors. Lastly, in certain cases to clinch the diagnosis of carcinomatous infiltrations in the anterior wall of the stomach. While a simpler means may often be effective, nevertheless there are cases in which the instrument may be of very great assistance.

Southern California Practitioner, Los Angeles.
March.

34 Relationship of Diseases of the Bronchi and Lungs to Those of the Nose and Throat. Frank W. Thomas.
35 *Management of Pneumonia with Special Reference to Hydrotherapy. Simon Baruch.
36 Cotton Mather, Zabdiel Boylston and Inoculation. James G. Mumford.

35. Management of Pneumonia.—The plan of treatment recommended by Baruch consists: 1. In absolute rest and isolation. 2. Thorough ventilation, abundance of fresh air; plenty of oxygen in this manner will avoid the necessity of later oxygen inhalation. 3. Drink. The patient should receive from four to six ounces of water at 40 F. every hour. He often orders a few drops of hydrochloric acid or other placebo to be taken in four to six ounces of ice water every hour to insure regular administration. 4. Stimulation. This is unnecessary, except in alcoholics who are accustomed to it. Such cases may receive from ½ to 1 ounce of brandy every three or four hours, according to the previous habits. 5. Medication. Baruch is still in the habit of beginning the treatment of all cases of pneumonia with 8 or 10 gr. of calomel so as to clear out the system, given dry on the tongue and the mouth well rinsed with water mixed with calomel before it is swallowed, so as to prevent ptyalism and destroy diplococci in the mouth. Several copious movements of the bowels should follow this, if not, citrate of magnesium is administered. He says avoid the small doses of 1/10 of a grain so frequently administered. They disturb the patient and irritate the intestinal canal. Strychnin is sometimes useful when the first sound of the heart becomes feeble, and should be given hypodermically in doses of 1/60 to 1/30 gr. every six hours. Small doses of the coal tar preparations are sometimes good calmative agents. One dose of from 6 to 8 grains of ammonol will produce sleep and quiet the patient. It should not be given oftener than once in twenty-four hours. 6. Hydrotherapy. In children he uses the tub bath, not less than 85 F. with constant friction, for six to ten minutes whenever the rectal temperature is over 102. Sleep, if natural, should not be disturbed. In adults he does not use the tub bath because of the disturbance to the patient. The toxemia in pneumonia is rarely so intense as in typhoid, and the temperature yields more readily. He therefore uses wet compresses consisting of three thicknesses of old linen in the shape of an old-fashioned oil-silk jacket or loose waistcoat, open at the shoulders: This is wrung out of water at 60 F., applied around the entire chest and snugly covered with a similarly shaped piece of flannel, a little larger in size, without any impervious covering. This is repeated every hour while the patient is awake until the rectal temperature reaches 99.5. It is never removed from the chest unless thoroughly warm. This application fulfills the following therapeutic indications: The gentle shock and reaction following it produces a refreshment of the nervous system; inspiration is deepened, dyspnea, which Baruch thinks is a sign of diplococcus infection rather than pulmonary obstruction, is relieved. The patient brightens up and feels refreshed. Heart failure is prevented. It acts as a direct tonic to the heart. The elimination of toxins is furthered by improvement in the circulation and the quantity of urine increased. Perspiration is another elimination process which is favored. The alkalinity of the blood has been shown to be increased. The temperature is reduced after each cold compress. The abstraction of heat is followed by a reaction which warms the damp linen. He says see to it that the nurse does not apply oiled silk over the compress and make a poultice of it, relaxing the vasoconstrictors and making the cutaneous circulation sluggish, which is not desirable. He thinks with this management the crisis is not often observed; lysis is the ordinary resulting process. After the acute manifestations have subsided, the temperature and pulse being normal, the patient may be allowed to rise, and after a few days ride out if the weather is propitious, even though the physical signs indicate that resolution is not complete. He has reduced by this method the mortality in his hospital practice from 50 per cent. down to only 12 per cent., which, considering the desperate character of the cases, many of them being poor Italians and persons of bad habits, is a very excellent percentage. He claims that this method is based on the conservative tendencies of the human organism, which must not be embarrassed by powerful medicine, but aided and encouraged. Careful watching of the patient and earnest attention to the minutest details are essential to success.

Ophthalmic Record, Chicago.
March.

37 *Further Investigation Concerning Eye Defects in Students. Edgar James Swift.
38 Some Notes on Bullous Keratitis. Howard F. Hansell.
39 *Hygiene of the Eyes in Mexican Schools. M. Urbe Troncoso.
40 Optic Atrophy Following Iodoform Poisoning. Walter H. Snyder.
41 *Small Shot Injuries of the Eyeball. H. Moulton.
42 Simple Photometer Adapted for Use at the Reading Distance. William A. Martin.
43 Primary Chancre of Conjunctiva Followed Ten Years Later by Interstitial Keratitis of the Same Eye. F. W. Marlow.
44 Corectopia and Ectopia Lentis. Extraction of the Opaque and Dislocated Lens. Casimir D. Wentcott.
45 *Corneal Ulcer Notes. H. Gifford.

37. Eye Defects in Students.—The subjects of Swift's study were students in the State Normal School at Stevens Point, Wis. The tests included the usual ones for vision, the card test for astigmatism, the Maddox multiple rod test for muscle insufficiency, and diagnosing errors of refraction by means of the ophthalmoscope. All these methods were used for each subject, and their results are classified in groups. A summary of the observations is stated as follows:

1. Only 22.22 per cent. of the 216 students examined had normal vision. 2. Of those with normal vision only one failed to disclose some manifest error of refraction or muscle insufficiency. 3. Thirty-five of the 48 with normal vision showed manifest compound hyperopic astigmatism in one or both eyes, while of the remainder, 4 had simple hyperopic astigmatism and 4 others hyperopia. In most of the cases more or less muscle insufficiency was evident. 4. In 20 per cent. of those examined the vision of one or both eyes—the most defective where there was a difference—was below 20/30, while between 10 and 20 per cent.—nearly as many as had normal vision—were unable to read the 20/40 line at a distance of twenty feet.

39. Eye Hygiene in Mexican Schools.—Troncoso has inspected the eyes of the pupils in the Normal School of Mexico City, including more than 500 students, and reports the results. He finds that pure hypermetropia diminishes in proportion to the age, but hyperopic astigmatism becomes more frequent. The number of cases of myopia amounts to 19 per cent. The proportion of myopic cases in Mexico in proportion to some other countries is not considerable. The influence of race, he says, is notable. In place of the widely separated orbits of the broad-faced German, who has difficulty in obtaining convergence, we find the head of the Mexican native narrow, and convergence easy. The abundant and prolonged daylight, even in the winter time, also has a bearing on the comparative infrequency of myopia in Mexico, but the proportion of cases of ametropia is considerable. Fully 42 per cent. of the pupils in the Normal School have not sufficiently clear vision to enable them to follow the teacher's explanations on the blackboard, and 25 per cent. require such close approximation that it is incompatible with the functional integrity of the organ. A reform in school building it was supposed would relieve the condition, but this has not proved the case, and the detection and

correction of ocular and aural defects is necessary to check diseases of these organs in their incipiency. He pleads for the general adoption of systematic school inspection and a warning sent to parents of the defective children, calling on them to secure proper medical advice.

41. **Small Shot Injuries of the Eyeball.**—Moulton calls attention particularly to two forms of shot injury, those in which the shot perforates the lid or the orbit wall and impinges at a tangent on the sclerotic without perforating it, but with such force as to cause rupture of intra-ocular vessels and hemorrhage within the vitreous chamber. Another form is where the shot makes a puncture and counter-puncture in the globe, that is, passes directly through the orbit. In the first of these the prognosis, if guarded, is relatively good; in the second not absolutely bad, especially if the point of entrance does not involve the "dangerous region." Five cases are reported illustrating these injuries. His idea, he says, is to encourage in suitable cases the adoption of a reasonable conservatism in the treatment where a wound has been made by a body more likely than any other to have passed through the orbit or glanced off from it.

45. **Corneal Ulcer.**—The advantages of the Saemisch cut are noted by Gifford and the supplementing of the cut in severer cases with burning of the ulcer. In mild cases he would prefer to scrape it thoroughly and apply one of the milder caustic acids, with re-opening of the cut every twelve hours at least. If after twenty-four hours the progress of the ulcer is not certainly stopped, the edges of the cut should be cauterized so as to open into the anterior chamber. If this, in connection with a pressure bandage, does not produce constant leakage of the aqueous or a certain cessation of the infection, enough tissue should be burned out to insure leakage. He thinks the advantages of the Saemisch cut are due not only to the relief of tension, but also to the flooding of the parts with alexins or natural antitoxins and bacterolysins of the blood contained in the aqueous. He endorses the recommendation of Fox and Bulson of trichloracetic acid for the milder forms of ulcer. Since using it he has almost discontinued the use of iodin. In the severer forms, however, it is not to be relied on. If after a single application, however, it is evident that the infection continues, it is better to use the galvano- or Paquelin cautery. He thinks this latter is not used enough in eye surgery. It has the advantage of greater penetrating power and that it does not require to be so hot as to dazzle the eye of the operator and embarrass accurate use. He thinks it also of value in the removal of epithelioma; for burning out the stump of the optic nerve, and in the few cases when it is necessary to destroy the tear sac.

Annals of Otology, Rhinology and Laryngology, St. Louis.
December.

46 Paraffin Prothesis. James T. Campbell.
47 *Modification of the Krieg Operation for Deviated Septum. F. Gurney Stubbs.
48 *Platinum Rhinitis. Lorenzo B. Lockard.
49 Otitic Serous Meningitis, Lumbar Puncture—Recovery. Francis E. Huber.
50 Primary Epithelioma of the Nasal Fossa, with Report of Case. S. Ingerman.
51 Mastoid Disease and Cerebellar Abscess. Seymour Oppenheimer.

47. **Septal Deviations.**—The modification of Krieg's operation here proposed by Stubbs is as follows: After the usual preparation and cocainization,

> With an ordinary scalpel an incision is made perpendicularly along the entire anterior edge of the triangular cartilage or side of convexity, this being facilitated by drawing the fleshy part of septum sharply to opposite side. With a small, flat, somewhat curved on the flat, perichondritome or elevator the muco-perichondrum is separated over the convexity. Then beginning at anterior edge of cartilage do the same on side of concavity. The field of vision is improved by having the assistant, who stands behind the patient to steady head, use one or two blunt hooks or retractors to open naris in place of nose speculum. If desired a stitch can be taken in fleshy portion of septum, which will include a strip of gauze. This will help to retract anterior edge of septum to opposite side. When both sides of cartilage are stripped the mucous membranes generally balloon to opposite sides and expose the cartilage in its entirety. The cartilage is now cut out preferably with a pair of Grünwald's alligator scissors. If more is desired to be removed superiorly or inferiorly, it can be trimmed down with a pair of Krause's fenestrated cutting forceps. Should there be a bony involvement in the deviation, continue the separation backward of periosteum, and remove the bone with a pair of fenestrated cutting forceps, preferably those of Laurent. If deviation involves only posterior half of cartilage, the incision in same can easily be made in front of convexity and muco-perichondrium separated only over concavity of deviation. With all deviation removed the linear incision can be stitched or not, as suits the operator, while moderate snug packing on both sides brings the muco-perichondrial walls firmly together and prevents an accumulation of blood between them.

He mentions the advantages of this operation as shortening the time, giving a better command of the field of operation, less hemorrhage, no flap being made that can be injured, preservation of entire intact mucous membrane, resulting straight and even septum, need of but few instruments, and these not special ones, the non-occurrence of perforation if the membrane is punctured on side of concavity, shortening of time of repair and the successful removal of the obstruction.

48. **Platinum Rhinitis.**—This condition has been observed by Lockard. The patient was a photographer and the attacks had been diagnosed as hay fever. They occurred only after he had taken up the use of platinum paper for photographic prints, and in the beginning never appeared unless he had been at work in the dark room for thirty to ninety minutes, and rapidly subsided, but at present they occur in a few minutes and never completely subside. On handling other prints the symptoms do not occur. As they are elicited by the use of the dry paper their chemistry need not be considered. He has seen four other cases, with almost identical histories. In all of them the absence of any ulceration or necrosis would indicate that the platinum action is of purely mechanical origin. He knows of no effective treatment except change of profession and discontinuance of work with this particular substance.

The Laryngoscope, St. Louis.
March.

53 *Radical Operation for the Cure of Chronic Suppuration of the Antrum of Highmore, Sphenoid Sinus and Ethmoid Cells. T. Passmore Berens.
54 *Tuberculosis of the Larynx. Sidney Yankauer.
55 *Middle Turbinal Hypertrophy as a Cause of Hay Fever and Other Disturbances, Nasal and Otherwise. Edward J. Brown.
56 Pipe Smokers' Ulcer of the Hard Palate. Adolph Rupp.
57 *Septum Narium in Aborigines and the Cause of Deviations of the Septum in General. W. Freudenthal.
58 *Case of Objective Tinnitus Auri. Arthur I. Well.

53. **Antral Disease.**—Berens reports a case where an extensive operation of opening the anterior wall of the antrum was performed and the cavity was found full of myxomatous masses, granulation and pus. After freeing the antrum the sphenoidal cavities were also found involved, and had to be thoroughly cleared out. The operation is described in detail on account of the advantages which the author thinks it offers over the nasal route. The results have been so far good, though the age of the patient was not favorable, the condition of long standing and the damage extensive.

54. **Tuberculosis of the Larynx.**—Yankauer's article is a review of the recent literature on the subject.

55. **Middle Turbinate Hypertrophy.**—In this article by Brown disorders of the middle turbinate are considered as a very probable cause of many cases of hay fever, supporting Bosworth's contention. Brown has carefully examined the condition of this organ in his cases, removing the hypertrophied growths. He says few nasal operations are followed by such brilliant results as are often met with here. His own practice has been to remove a part of the bone in nearly all cases, and while he has regretted this in some instances, he has quite as often regretted that he did not remove more. He is doubtful whether any antitoxic or any other local or systemic medication will render unnecessary the intelligent surgical treatment of most of these cases.

57. **Septal Deviations.**—Freudenthal finds that deviations occur not only in civilized but in uncivilized races. Trauma may be eliminated as the cause in many instances, and the high arched palate has been disproved as a causal factor by Talbot. The most plausible explanation, and one that he has held to for a long time, is that of Chiari, that human individuals are asymmetrical. This asymmetry is most evident where the two halves of the body join together as in the septum. The side on which the growth is strongest will develop the most tissue, and convexity will take place and increase more and more until deflection results. In practice, however, we see

cases where the septum is almost as thin as paper in its convex part, and here he thinks the deposition of tissue must have stopped and a rarefying process set in on the concave side. The cause of this is hard to explain, but he thinks it is probably due, like the other condition, to an increased tissue building by the various human customs.

58. Objective Tinnitus Auri.—In the case observed by Weil the connection of the ear of the observer with that of the patient revealed a loud systolic murmur, synchronous with the heart beat, varying in intensity. The patient, of course, experienced symptoms much more actual and the hearing was impaired on both sides. The cause for these objective symptoms was not found. The heart, lungs, and chest were apparently normal. No signs of aneurism could be detected anywhere, no anemia and no venous hum in the neck. The ears, nose and pharynx are normal and also the appearance of the ocular fundi. He discusses the literature of this condition, and the causes that have been assigned to it, and shows how they have failed to explain it. He remarks, in conclusion, that where no aneurism can be determined and no marked anemia exists, the cause of persistent objective tinnitus will remain a mystery.

Journal of Infectious Diseases, Chicago.

March 19.

59 Toxic Action of Scarlatinal and Pneumonic Sera on Paramecia. Alice Hamilton.
60 *Pneumococcal Bronchiolitis (Capillary Bronchitis). C. P. Clark and F. H. Batman.
61 Improved Technic of Agglutination Test in Typhoid Fever—the Use of Formalinized Cultures. E. H. Ruediger.
62 *Bacillus Mucosus Capsulatus. A Study of the Group and an Attempt at Classification of the Varieties Described. Roger G. Perkins.
63 Agglutination in the Group of Fluorescent Bacteria. Mary C. Lincoln.
64 *Studies in Pneumonia and Pneumococcus Infections. Edward C. Rosenow.
65 Epidemic Gonorrheal Vulvo-vaginitis in Young Girls. Joseph L. Baer.
66 Critical Study of the Methods in Current Use for the Determination of Free and Albuminoid Ammonia in Sewage. Earle B. Phelps.
67 *Simple Test for the Routine Detection of the Colon Bacillus in Drinking Water. William R. Stokes.
68 *Isolation of Bacillus Coli Communis from the Alimentary Tract of Fish and the Significance Thereof. George A. Johnson.
69 *Sodium Sulphite: A Dangerous Food Preservative. Charles Harrington.
70 Studies of Media for the Quantitative Estimation of Bacteria in Water and Sewage. Stephen De M. Gage and George O. Adams.

60. Pneumococcal Bronchiolitis.—Clark and Batman report a fatal case of pneumonia in which the examination showed that the large bronchi were free from inflammation and the alveoli were little affected. Bronchopneumonia in this case must be considered secondary. The bronchioles were the seat of the infection. The case should be regarded as one of capillary bronchitis, or preferably bronchiolitis, occurring in a young man aged 21. The inflammation was bilateral, affected all the bronchioles, and extended into the minutest subdivisions. The bacteriologic examination showed the *Diplococcus lanceolatus* to be the essential etiologic factor. The clinical diagnosis was pneumonia, probably associated with miliary tuberculosis. The case is also of interest in that it occurred during an epidemic of lobar pneumonia, in which over 3,000 individuals died in six months, and, in the great majority, of consolidation pneumonia, while in this case there was a diffuse affection practically free from consolidation.

62. Bacillus Mucosus Capsulatus.—Perkins finds that under this name are indicated a number of organisms described otherwise under various names, and closely related morphologically and culturally, but differing in certain characteristics. Fermentation experiments showed constant results that may be used as a basis for the separation of the different members of the group according to their ability to ferment lactose and saccharose. The organisms of the group are widespread, and have been found in almost all pathologic lesions which may be caused by bacteria. Such infections are exceedingly frequent in Cleveland, and appear to be almost exclusively due to the members of the *Bacterium aerogenes* division. These organisms may form gas from the body carbohydrates, either during life or just after death. The portal of entry of the infection appears to be the nose and mouth, and secondarily, the digestive tract.

64. Pneumococcus Infections.—Rosenow gives the following conclusions as justifiable:

1. With improved technic, using for inoculation large quantities of blood, the pneumococcus can be recovered in practically all cases of croupous pneumonia, and in obscure cases of pneumococcus infection blood cultures may be a diagnostic method of positive value. 2. Pneumococcemia in pneumonia does not mean an especially unfavorable prognosis, and it is to be regarded here, as in subcutaneous pneumococcus infections of the rabbit, not as an especially ominous or agonal process, but rather as an integral part of the infection. 3. There seems to be a diminution either in the number or viability, or both, of the pneumococci in the blood at the time of crisis. 4. The number of leucocytes in pneumonia in man and in the pneumococcus infection of the rabbit is an index to the degree of resistance, and the leucocytes probably constitute an important factor in combating the infection. The clinical observation that a high leucocytosis means a favorable prognosis irrespective of the presence of pneumococci in the blood is undoubtedly correct. 5. The hypoleucocytosis developing on a previous hyperleucocytosis during the course of many fatal cases of lobar pneumonia (and in pneumococcus infection of the rabbit), can not be looked on as due to the entrance of the pneumococcus cells into the blood stream, but probably rather as the result of an exhaustion of the resisting powers. 6. The leucocytosis may be incited, at least in part, by soluble substances liberated by pneumococci. 7. It was not possible to establish any appreciable difference in the degree of virulence of the pneumococcus isolated early or late in the course of the disease, nor in the fatal or non-fatal cases. 8. Fresh normal and pneumonic blood and serum have no bactericidal influence on the pneumococcus. Whatever other differences they may have, so far as this point goes, the serum from pneumonia patients behaves exactly as does normal serum. 9. The interesting question whether lobar pneumonia is the primary result of a direct local infection of the lung, or a secondary localization of a primary blood invasion, is as yet hardly ripe for final discussion, but that the latter does occur, at least in some instances, is not altogether unlikely. 10. Agglutination of the pneumococcus by pneumonic serum is constant, but the conclusion drawn by certain investigators that the voluminous sediment and the early clouding of certain immune sera in which the pneumococcus is cultivated are due to a rapid lysis of the cocci seems incorrect. It seems to concern a precipitate the result of acids which appear when pneumococci are grown in pneumonic serum. 11. The production of acids by pneumococci in pneumonic serum suggests that some of the toxic symptoms of pneumonia may be due to acid intoxication. This needs further study. 12. Since the viability and the virulence of the pneumococcus are preserved for a remarkably long period on blood agar, we have in this medium an important aid to investigations of this micro-organism. The constituent of the blood which has this rather remarkable effect is probably the hemoglobin. Blood-agar plates are valuable for differentiation of pneumococci and streptococci. 13. That the pneumococcus by its growth in rabbits produces a soluble hemolysin for the corpuscles of this animal is probably true. That this is either small in amount or unstable, or both, is likely.

67.—See abstract in THE JOURNAL, xli, p. 1293.

68.—Ibid.

69.—Ibid., p. 1292.

Columbus Medical Journal.

March.

71 *Collection and Registration of Vital Statistics. Cressy L. Wilbur.
72 *Local Treatment for Varicose Ulcers. Fred Fletcher.
73 *Shall Consumptives Be Excluded from the Schools? C. O. Probst.
74 Typhoid Fever in Columbus. Report of Commission.

71. Vital Statistics.—Wilbur calls attention to the importance of vital statistics, and illustrates the inconveniences of their absence by cases observed by the Chicago Health Department and the author's own observations in Michigan. He urges physicians to favor legislative action in the matter.

72. Varicose Ulcers.—Fletcher recommends for the treatment of varicose ulcers the saturation of a good-sized piece of gauze with bovinine, and its application to the ulcer, covering it over with gutta-percha tissue, and changing it every six hours. This, or a modified form of treatment, using gauze with bovinine or salt solution, is applicable to all varieties of varicose ulcers.

73. Consumptives, Shall They Be Excluded from the Schools?—Probst discusses the question whether consumptive teachers or scholars should be excluded from schools. He remarks that if consumption were transmitted as smallpox or scarlet fever, there would be no need to discuss the question, but it is not. It is not necessary to enforce absolute rules excluding consumptives, but it is essential that they should be educated to carry out necessary measures to prevent the communication of the disease. They should also be dissuaded from attending school for their own sake. If teachers and children were thoroughly instructed in regard to this matter, much good could be done.

St. Louis Courier of Medicine.
March.

75 *Serum Treatment of Summer Diarrhea. John Zahorsky.
76 *Physicotherapy in the Cure of Cancer. J. A. Riviere.
77 *Experiments on the Preservation of Milk. C. A. Snodgrass.
78 *Brief Note on Frost-bite in Young Children. W. A. Hardaway.
79 Pregnancy Complicated with Cyst of Ovary. Operation, Recovery. Report of Case. Charles H. Dixon.

75. Serum Treatment for Summer Diarrhea.—Zahorsky used two forms of anti-dysentery serum prepared by Parke, Davis & Co., the first in which only one race of the micro-organism was used, which was called monovalent, and the other in which several varieties of dysentery bacilli were employed, called polyvalent. He reports cases treated with both, and concludes that the monovalent anti-dysentery serum was too uncertain in its action for general use, but the polyvalent serum should be given a trial in all cases of summer diarrhea.

76. Cancer.—The physicotherapy used by Riviere consisted in radiotherapy, static breezes, franklinization, high frequency currents, static baths, arsonvalisation, etc. The effects were the disappearance of the edema, engorgement and indurations, cessation of pain, cicatrization, disappearance of cachexia and disappearance of the tumor. He thinks it a useful method to obtain retrogression of malignant tumors, sedative action and disappearance of glandular engorgement, besides being the only possible recourse in inoperable neoplasms, especially the vegetating and ulcerating forms and in recurrence after operative ablation. The field exposed for treatment should include a wide area around the tumor.

77. Milk Preservation.—Snodgrass, the city bacteriologist of St. Louis, says the object of his experiments was to determine the effect on milk of ordinary room temperature without the use of chemical preservatives, the effects of refrigeration or the addition of formalin in various proportions and the rapidity of multiplication of typhoid bacilli in sterile milk without preservatives. He tabulates his findings, and concludes that the ordinary commercial milk kept at room temperature is generally unwholesome at the end of twenty-four hours, to say the least; it is sour to the taste. We must also infer that the ordinary commercial milk kept at 44.6 F. remains wholesome for four days or more. Ordinary commercial milk does not remain wholesome for twenty-four hours when kept at room temperature with the addition of formalin 1 in 25,000 or 1 in 50,000, and questionably so when the dilution is made 1 in 10,000. In adding formalin to refrigeration the wholesomeness of the milk is improved only when the dilutions are made 1 in 10,000 and 1 in 25,000. The rapid increase of typhoid bacilli indicates that milk infected with pathogenic organisms whose rate of increase is about the same, becomes rapidly dangerous at a temperature of 77 F. Refrigeration, therefore, he concludes, is far more efficacious than the use of formalin without refrigeration in the preservation of commercial milk.

78. Frost-Bite in Children.—Hardaway reports three cases in which there was an erythematous area on the face with considerable discomfort, increased temperature and slight enlargement of the cervical glands. The children had been exposed out driving in very cold weather, and the condition was practically a frost-bite. He thinks this accident is probably well known in the colder climates, but most physicians seem to be unfamiliar with it. In all cases the child had a fair complexion and light hair.

Therapeutic Gazette, Detroit.
March 15.

80 *A Short Supplement to Dr. Barton Cooke Hirst's Paper on the Treatment of Puerperal Eclampsia. James Tyson.
81 *Small Hospital Epidemic of Pneumococcus Infections, with Remarks on Transmission of Pneumonia and the Methods by Which It Can Be Prevented. David L. Edsall and Albert A. Ghriskey.
82 *Importance of Epistaxis in Diagnosis of Nasal Diphtheria. James H. McKee.
83 *Curative Effect of Erysipelas on Atrophic Rhinitis. I. Valentine Lovi.
84 Venesection as a Therapeutic Measure in Lobar Pneumonia. O. A. Shank.

80. Puerperal Eclampsia.—Tyson takes up the point of the use of morphin in puerperal eclampsia, and holds that it is safe in case the kidney is capable of eliminating it. Since most cases of puerperal eclampsia occur in connection with parenchymatous nephritis the results are often brilliant. Should it happen, however, that the condition is an interstitial one, especially in cases where nephritis preceded the pregnancy, its use is attended with very grave risks. In order to secure the best results of treatment in uremic convulsions by hypodermoclysis with normal salt solution, he holds that sweating should precede the infusion, as it is possible, he thinks, to overload the venous side of the circulation and dangerously dilate the right heart. He thinks we would do well to use blood letting more frequently in other than puerperal cases, or by sweating to make room for salt solution subsequently introduced. The depletion removes a certain amount of toxic matter, which is still further diluted by the salt solution.

81. Pneumococcus Infection.—The direct contagion of pneumonia is discussed by Edsall and Ghriskey, who report an interesting series of cases occurring in the Episcopal Hospital, Philadelphia, in April, 1903. There was a patient there suffering from a severe attack of pneumonia. He was evidently overwhelmed with pneumococci, for the blood cultures gave a free growth of these organisms. The patient died, and although the bedclothes were changed, the bed aired and the ward cleaned, the man who succeeded him in his bed showed a growth of pure pneumococci in his blood in twenty-four hours after his admission. There were no other signs of pneumonia, excepting a fairly marked bronchitis. The next day he was transferred to another ward, and the patient following, a man of 22, with sciatica, was admitted and happened to be placed in the same bed. He remained there about thirty-six hours, and in less than two days after being transferred he developed a pneumonia of the entire left lower lobe, which was mild. Within a day or two a boy of 14, with tubercular meningitis, was placed in the same bed after its vacation, and two days after his arrival showed an increase of temperature with leucocytosis of 14,000; his respiration grew rapid and remained so. It was never determined that he had pneumonia, but in view of the facts concerning the other cases the authors think that he must have had some other form of pneumococcus infection. Five days after having been placed in this bed he died. A postmortem could not be obtained. The day after this patient, an adult man of 42, with mild alcoholism, was placed in the same bed, and two days later showed a sudden rise of temperature, pain in the right side, and later in the day had clear signs of pneumonia of the right lower lobe. This took a mild course, and the man recovered. The day after this man's admission there was placed in the bed opposite, and about ten feet away from the one occupied by him, a patient in the first week of typhoid fever. Two days later a blood culture was taken from him, and a pure culture of pneumococci was obtained. He, however, went through a mild course of typhoid without any signs of pneumonia or other complication, and recovered without any special incidents. When the second case of pneumonia developed in bed No. 2 and the second pure culture of pneumococci was obtained in the ward from a typhoid patient, it appeared to the hospital authorities that pneumonia contagion was occurring, and the ward was formalinized and no cases occurred subsequently. The reason why the beds were so rapidly occupied was because that ward was used for the temporary detention of noisy patients, who were kept there for only a short time. The epidemic, while there were only two cases of pneumonia, is of interest, especially in connection with the cases occurring without pneumonia, but with pneumococci in the blood. Edsall and Ghriskey think the ideal method would be to isolate cases of pneumonia, but this is almost impracticable at present. It would be a good thing to make it a reportable disease, and the practice of disinfecting after almost every infectious disease, they believe, is getting to be more general. The observations are of interest also in relation to the period of incubation. They show that this may have been less than forty-eight hours in one case, and only a little more than that in the other. Other authors, Weibell for instance, have observed that the period of incubation may be very brief.

82. Epistaxis in Nasal Diphtheria.—McKee describes a series of cases, and thinks that in connection with other facts

they justify the following views: 1. That the slight staining of nasal discharge with blood, either in mild or severe nasal diphtheria, would seem to be due to the severity of the local disease. The nasal mucous membrane bleeds very easily. In subacute cases the moderate epistaxis may be dependent on the depth of the inflammatory process. Ulcers may exist on the nasal septum. 3. The slight or moderate hemorrhages in the more acute cases are probably dependent on the toxemia. Of course, the idiosyncrasy of the individual plays its part. 4. The alarming or even fatal nasal hemorrhages in severe diphtheria are always dependent on profound toxemia. In conclusion he summarizes as follows:

1. Staining of the nasal discharge with blood is quite commonly seen in nasal diphtheria, and epistaxis of moderate severity is not infrequently observed. 2. Nosebleed is a symptom of much diagnostic value, for it may suggest the possibility of nasal diphtheria in any case, but particularly in the dangerous (to the community) mild cases. Among the causes of epistaxis, diphtheria of the nose should be accorded a separate and prominent place. 3. In malignant, mixed, or streptodiphtheria (Northrup) of the nose, epistaxis may be most alarming and may even be the immediate cause of the fatal termination.

83. **Erysipelas and Atrophic Rhinitis.**—Levi reports a case of atrophic rhinitis which recovered after a third attack of epistaxis, and a subsequent operation revealed no evidence of the former condition. He does not explain the mechanism of the cure, but suggests that the pathology of the two diseases is diametrically opposite. In one we have anemia and atrophy, and in the other hyperemia and swelling. The action of the bacterial products of erysipelas on certain other diseases is significant. Beside the case here reported he finds but three other similar ones on record.

Medical Age, Detroit.

March 25.

85 Pathology of Lobar Pneumonia. R. W. Knox.
86 Etiology of Speech Disorders. James M. Brown.
87 Incipient and Acute Insane—Recoverability and the Factors Therein. J. R. Courtney.

American Practitioner and News, Louisville.

March 5.

88 Present State of Radiotherapy. J. R. Wathen.
89 Some Observations in Treating Acute Morphia Poisoning. Arthur Kipp.

Virginia Medical Semi-Monthly, Richmond.

March 25.

90 Atrophy of the Prostate. Robert C. Bryan.
91 Furuncle and Carbuncle. Wallace Neff.
92 Diphtheria Antitoxin—Its Production, Uses, etc. William B. Towles.
93 X-ray for Reducing Enlarged Tonsils. Alexander Irvine.
94 Infant Feeding. Loren B. T. Johnson.
95 Aseptic Technic in Obstetrics. John Egerton Cannaday.
96 Unique Cases: (1) Gauze Sponge Used in a Laparotomy Passed by Bowel; (2) Bowel Ruptured Some Time Before Appendectomy—Recovery; (3) Rupture of Hepatic Abscess Through Diaphragm into Lung—Recovery Without Operation; (4) Sloughing Off of Cervix Uteri and Lacerated Uterus. John W. Dillard.
97 Some Unappreciated Uses of the X-ray. Alfred L. Gray.
98 Dangers of the X-ray Operator. John T. Pitkin.

Journal of Eye, Ear and Throat Diseases, Baltimore.

January-February.

99 Treatment of Adenoid Vegetations. John R. Winslow.

Physician and Surgeon, Detroit and Ann Arbor.

February.

100 Chronic Rhinitis, Its Varieties and Treatment. Otto T. Freer.
101 Stoll on Medical Ethics (1788). George Dock.
102 Treatment of Chronic Non-tuberculous Inflammation of the Lungs and Pleura. Ernest L. Shurly.

Medical Mirror, St. Louis.

March.

103 Peritoneal Adhesions—False Ankylosis of Arm. Robert T. Morris.
104 Bronchopneumonia. H. R. Hall.
105 Brief Observations on Some Conditions in Women That Are of Much Concern to the Practitioner. J. Ridgly Simms.
106 Important Points in Physical Diagnosis. C. H. Walawright.
107 A Man Without an Appendix. H. C. Dalton.
108 Theory of La Grippe and of the Exhaustion Following the Same. Joseph E. Harris.

Proceedings of the Pathological Society of Philadelphia.

February.

109 Review of the Recent Literature on the Pathology of the Liver. Joseph Sailer.
110 Case of Splenomegaly, with Cirrhosis of the Liver. Clifford B. Farr.
111 Pancreatic Hemorrhage; Death; Autopsy. B. Franklin Stahl.
112 Report of Committee on Morbid Growths Concerning Dr. Stahl's Specimen.
113 Case of Xanthoma. Joseph McFarland.
114 Uremic Hemiplegia, with Changes in the Nerve Cells of the Brain and Cord, and Recent Primary Degeneration of the Central Motor Tract. T. H. Weisenburg.

Kansas City Medical Record.

March.

115 Clinical Significance of Pleuritic Effusion. A. L. Fulton.
116 Uterine Fibromyoma. F. T. Van Emon.

Detroit Medical Journal.

March.

117 Dysmenorrhœa and Allied Manifestations. Ella B. Everitt.
118 Some Observations on the Surgery of the Ear. Don M. Campbell.
119 Flap from the Fascia Lata in the Operation for the Radical Cure of Inguinal Hernia. Hal C. Wyman.
120 Mastoid Operation vs. Wilde's Incision on a Child Not Quite Eight Months Old. Emil Amberg.

Journal of Medicine and Science, Portland, Ore.

March.

121 Conservatism in Gynecology. C. B. Williams.
122 Mesotan and Aspirin in Rheumatic Eye Affections. James F. Smith.

Nashville Journal of Medicine and Surgery.

February.

123 Shall the Consultant Divide Fees with the General Practitioner? Charles B. Briggs.

Oklahoma Medical News-Journal.

March.

124 Appendicitis. W. J. Jolly.
125 Fracture of the Humerus of a Child in Its Delivery. J. T. Moore.

Colorado Medical Journal, Denver.

January.

126 Treatment of Diabetes Mellitus. E. P. Hershey.
127 The Anesthetic and the Anesthetist. Cuthbert Powell.
128 Paralytic Squint. R. W. Stevens.
129 Therapeutics of Some External Diseases of the Eye. Wm. C. Bane.

Medical Herald, St. Joseph, Mo.

March.

130 Typhoid Fever and Its Treatment. B. A. Bobb.
131 Foreign Bodies in Bronchi: Treatment. John Boyd Tyrrell.
132 Some Thoughts on Fumigation. G. A. Johnson.
133 Cervical Tuberculosis. F. E. Walker.
134 Bunions. C. H. Churchill.
135 Treatment of Abortion. Frederick Treon.
136 Pathology and Morbid Anatomy of Lobar Pneumonia. F. B. McLaughlin.
137 Vesicular Mole. F. J. Heisenga.

Journal of the Association of Military Surgeons, Carlisle, Pa.

April.

138 Further Observations on the Treatment of Tuberculosis at Fort Stanton, New Mexico. Paul M. Carrington.
139 Treatment of Fractures of the Base of the Skull and Some Remarks Concerning the Method of Operating. Robert E. Bell.
140 Plea for Early Radical Treatment in Adenitis Inguinalis. Richard L. Sutton.
141 Some Experiments with the Trypanosoma Evansi. Edwin D. Kilbourne.
142 Military Hospitals and Nursing. Matt R. Root.
143 Red Cross Society of Japan. Nicholas Senn.

Alabama Medical Journal, Birmingham.

March.

144 Puerperal Eclampsia. R. B. Ward.
145 Address, Jefferson County Medical Society. W. H. Wilder.

Uterine Curettement.—In THE JOURNAL, April 2, p. 919, Dr. Craig was represented in our abstract as advocating minimal dilatation. This was the opinion of another authority, but which appeared to be Dr. Craig's policy. He advises quite the contrary.

FOREIGN.

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

British Medical Journal, London.

March 26.

1 *Coagulation Time of the Blood in Pregnant and Puerperal Women Suffering from Albuminuria and Eclampsia. Carstairs Douglas.
2 *Two Cases Involving the Question of the Site of Impregnation. Harrison Crimps and Herbert Williamson.
3 *Ventrofixation of the Uterus. W. J. Sinclair.
4 *Warning Signs of Danger to the Child During Labor. Frederic E. Daniel.
5 Clinical Notes on the Use of Bossi's Dilator. W. B. Arnistead.
6 Case of Tubal Gestation: Primary Intraperitoneal Rupture; Operation; Recovery. Brennan Dyball.
7 Treatment of Puerperal Eclampsia by a Combined Method. John Lithgow.
8 Abstracts of Hunterian Lectures on Pathology and Surgery of Certain Diseases of the Pancreas. A. W. Mayo Robson.

1. **Coagulation of the Blood in Albuminuria and Eclampsia.**—Douglas' article reports the results of the studies of the coagulability of the blood in pregnancy, puerperal albuminuria and eclampsia; also in cases of healthy puerpera, healthy pregnant women and healthy non-parous women. The methods are given in detail, the tests being made by blowing out the blood in a series of tubes within a certain period after filling, noting the time when it is impossible to completely free the tube from blood showing that coagulation has commenced. He finds that the average, shortest and longest coagulation time in all the different classes examined in between three and four hundred observations were very close to each other. There is nothing to support the theory of increased coagulability in this special class of cases, only that in pregnant albuminuria there is a little shortening of time. Douglas concludes from the observations that there is little difference in the coagulation time in healthy pregnant and puerperal women or in eclampsia before and after delivery, and that there is nothing—so far as the study of the coagulation of the blood goes—to support the view that the thrombi found in certain organs in fatal cases of eclampsia are due to increased coagulation.

2. **The Site of Impregnation.**—Two cases are reported by Cripps and Williamson which seem to throw some light on the question of the site of impregnation. In one tubal gestation occurred after complete removal of the ovary on the same side. The authors think that it is improbable that any portion of the oöphoron was left in the operation for dermoid cyst which had been performed and reject as a probability the existence of a third or accessory ovary on that side. Cases of such have been reported, but few have stood the test of examination. Where pregnancy has occurred after a double ovariotomy it has been demonstrated in some cases that portions of the organ were left or the author's description of the operation indicates the impossibility of absolute certainty of the removal of the whole organ. In the second case there was a pregnancy after resection of both tubes. In the first patient there was little doubt but that it was a case of what may be called an external migration of the ovum, but in what part of the course the impregnation occurred can not be said, possibly, as suggested by Sippel, it was in the abdominal cavity. It is difficult to understand the course of the pregnancy in the second case after the removal of a portion of the tube. It can hardly be that the severed ends were ultimately united and the canal again patent, but it is possible that a process of absorption may have occurred in the walls of the tube which were in contact with one another, ultimately leading to the formation of a fistula between the two portions and establishing the continuity of the canal.

3. **Ventrofixation of the Uterus.**—Sinclair criticises the various processes of supporting the retroverted uterus, rejecting absolutely Schultze's method and considering Schucking's operation as a timid and dangerous one. Alexander's operation with its modifications has a value in certain cases, but the operation which appears to him the best for the treatment of chronic ventrofixation is the one suggested by Olshausen in 1886. The tests which such an operation should stand appear to be: 1. That it should be devoid of danger with ordinary care; 2, must be easy to perform and the operator know that he can finish it with an absolute certainty; 3, must relieve the symptom; 4, must produce no new ones; 5, must leave the patient free from danger and in a condition for active exertion; 6, it must stand the strain of pregnancy, parturition and the puerperium as if it had never been done; 7, the uterus must afterwards continue to maintain the position it was placed in. To obtain the desired results he says the fundus uteri and the round ligaments must be strictly safeguarded and another important point is to effect complete and permanent adhesion of a sufficient area of the anterior surface of the uterus to the abdominal wall. Kelly's method is criticised, and the details of the operation as performed by Sinclair are given as follows:

> In performing the operation of ventrofixation I have discarded all suture material except catgut and the finest silk thread which can be conveniently manipulated. At first I used to try to close completely the vesico-uterine fold, but now for years I have introduced for this purpose only two catgut sutures, one at each side, well below the lowest point of the abdominal wound, after the uterus is firmly pulled upward by means of an ordinary vulsellum inserted in the center of the fundus and manipulated by an assistant. This is quite sufficient practically to close the fold without interfering with the distension of the bladder, and it is more of a preventive to any possible inclination of intestine then shortening of the round ligaments, to the extent practiced by most operators can be. The next step is to suture the peritoneum at the edge of the wound on each side. The fine silk sutures are introduced from the outside surface of the parietal peritoneum, passed through the peritoneum, and after taking a good hold of the uterus low down and near its margin, they are brought back through the peritoneum and firmly tied. The knot is thus always extraperitoneal. Two of such sutures are, as a rule, introduced on each side. The same process is now continued, with the addition that the sutures include the fascia as well as the peritoneum on each side. The transverse sutures are next introduced. There are two or three in number, consist of fine silk, and include fascia and peritoneum at the sides, and each takes a fairly extensive hold of the anterior surface of the uterus. The highest of the sutures is placed about halfway up from the isthmus to the fundus. In complicated cases, and when the prospect of pregnancy is very remote, the sutures have been placed considerably a little higher, though not often. All the sutures that penetrate to any part of the uterine tissue are buried sutures at the finish; or, if any suture includes skin as well, it is never left for more than three days, usually only forty-eight hours. There must never be suppuration in the tract of this suture. The highest transverse suture should always be buried. The last tubal wound is closed in the usual way, and it is an advantage to suture separately the edges of the fascia with catgut. The last step in every case is the introduction of a glycerin-pad pessary into the vagina to press forward and support the uterus during the formation of adhesions. The patients are kept in bed for a month or six weeks, and they are advised to lead invalid lives for several months.

There is hardly ever, he says, the slightest reaction in the simple cases, and the operation has stood the tests of efficacy given above in nearly one hundred patients. A considerable proportion of the patients have borne one or more children since the operation.

4. **A Warning Sign During Labor.**—The sign here described by Daniel is a sudden, spasmodic, diaphragmatic contraction from an attempt at respiration, while the child is still unborn; is usually communicated to the head of the child, through it to the forceps if these happen to be embracing the head. He thinks the movement is characteristic enough to be always recognized. It is a sort of double or duplicated movement repeated in quick succession. The main indication for this condition is to deliver the child as quickly as possible, even at the risk of a moderate amount of perineal rupture.

The Lancet, London.
March 21.

9 *Pathology and Surgery of Certain Diseases of the Pancreas. A. W. Mayo Robson.
10 *Treatment with Antituberculous Serum. Alexander Marmorek.
11 *Intravesical Separation of the Urines Coming from the Two Ureters as an Aid to Diagnosis in Surgical Diseases of the Kidney. Israel.
12 Training of the Feeble-minded. Francis Warner.
13 Two Cases of Hypertrophied Breasts in the Male (Gynæcomastia). A. Webb Jones and J. B. Christopherson.
14 Case of Acute Yellow Atrophy of the Liver. John Edwards and Maurice H. Smith.
15 Case of Hysterectomy for Cancer of the Uterus Coexisting with Pregnancy. Ian MacDonald and W. A. Mackay.
16 Hypersalorhydria. Walter Broadbent.
17 Case of Large Uterine Fibromyoma Removed from a Patient Postmortem. Alfred Brown.

9. **Pancreatic Disease.**—Robson's second lecture commences with a classification and description of the etiology and anatomy of the pancreas as explaining the etiologic factors and the symptoms of acute, subacute and chronic pancreatitis, together with cystic and hæmorrhagic conditions. He recognizes simple catarrh of the pancreas as a species of disorder as much as catarrhal jaundice. As regards the diagnosis he quotes Pitt's rule with approval: "Acute pancreatitis is to be suspected when a previously healthy person or a sufferer from occasional attacks of indigestion is suddenly seized with violent pain in the epigastrium, followed by vomiting, collapse, and in the course of twenty-four hours, by circumscribed epigastric swelling, tympanitic or resistant, with slight rise of temperature." In case of laparotomy fat necrosis is almost pathognomonic. The urinary tests for pancreatic crystals should not be neglected as a positive reaction has been obtained in all cases of acute pancreatitis in which it has been employed. As regards treatment, pain at the onset usually requires anæsthetics and shock may call for stimulants which may have to be given by enema. The early evacuation of septic material is important. Early exploration from the front, through the

middle line above the umbilicus or from behind through the left costovertebral angle is indicated to relieve the tension, secure drainage, evacuate septic material and arrest hemorrhage. The after-treatment is usually the combating of shock and keeping up the strength until the *materies morbi* can be thrown off. An exploratory operation would help the diagnosis in revealing a fat necrosis if it exists. Robson has operated in 4 cases of acute pancreatitis, with 2 recoveries. In 2 cases in which operation was refused death occurred in one patient at the end of the third day, and in the other at the end of a week of illness the patient succumbing with great suffering. There is no hard and fast rule between subacute and acute pancreatitis. The slower onset, longer course and more hopeful outlook indicate the propriety of the division. There is no reason in subacute cases why surgical treatment should not be attempted in the early stage in many cases. Robson has had 8 cases of abscess of the pancreas under his care; 6 were operated on and recovery took place in 5, though the relief was only temporary in 2. In the eighth case, not operated on, the abscess burst into the bowel and discharged. He also found 7 other operations reported with 3 deaths, making a total of 5 deaths in the 14 operations. Chronic pancreatitis is an interstitial change leading to the formation of fibrous tissue. It may be interlobular, exerting pressure on, and atrophy of, the true glandular substance; or intracinar, in which the tissue invades the islands of Langerhans, interfering with the metabolic function and producing glycosuria. In interstitial pancreatitis the pancreas is uniformly swollen, the harder lobules have the feeling of being mapped out and differentiated, very different from the feeling of the healthy gland and also varying from the hard nodular character presented by cancer of the head or body of the pancreas. The treatment is first to aim at the cause, such as gallstones, pancreatic calculus, duodenal catarrh, etc. But when the medical treatment has had a fair trial—not too long continued—and a condition of jaundice and loss of weight continue with signs of failure of the pancreatic digestion and metabolism appear, surgical treatment should be carefully considered. The obstruction should be removed and drainage established in the bile ducts. The author thinks that the operation sometimes arrests the process of disorganization, though it does not cure the lesions that have already been produced. He finishes his lecture by giving the statistics of operations which show the small mortality in his own cases of 3.9 per cent. and in others of 12.9 per cent.

10. **Antituberculosis Serum.**—Marmorek explains his method and the results which he claims. He first tried his method on the severer class of cases, and in some had brilliant results. He finds that the duration of the tuberculosis has much to do with the results of the serum treatment. In the very severe cases of long standing with large cavities, etc., the prognosis is unfavorable as far as the serum is concerned. Marmorek reviews the effects of the serum on fever, infiltration, dyspnea, expectoration, hemoptysis and other symptoms. Surgical cases he considered as equivalent to the slighter lung cases, for the lung is a tissue that has a less tendency to repair than other parts, and while his experiences has not been so great for surgical cases, he claims that even the severe ones, such at Pott's disease and hip-joint tuberculosis may be cured by the exclusive use of the serum. The tolerance to the serum with his method he thinks is absolute. The injections seem to agree more and more with the patient as they are continued. As a general thing, the dose should be adapted to the individual constitution and the state of the disease. A series of daily doses during four or five days agrees well with the patient, especially if between each two series there is an interval of three or four days. After two or three series of injections it is well to discontinue them for a week or a fortnight. For the rather chronic cases the dose of Marmorek's serum is ordinarily 5 c.c., while in the acute cases as much as from 20 to 30 c.c. may be used daily during the week. Even children bear this well. The reaction takes the form generally of the well-known serum erythemas which disappear in two or three days and discommodes the patients very little. The results of his treatment, he claims, are at least satisfactory.

11. **Urinary Segregation.**—Bickersteth's article reviews the history of attempts at urinary segregation, speaking especially in favor of Luys' method in which a catheter of a special form is introduced into the bladder, fitting the lower portion with its curve, and then by the use of a chain retractor a rubber membrane is drawn out, quickly dividing the organ into two different portions, thus enabling the separation of the urine from the two kidneys. The tests of renal efficacy which he mentions are the estimation of urea with Little's ureometer, cryoscopy, which he considers is of much value in certain cases, and the methylene blue test. He thinks that our power of accurate diagnosis in certain diseases of the kidney has been very greatly advanced by this method. In the histories of the various methods of urinary segregation he mentions Harris' segregator as the first practical appliance, but objects to it on account of its causing the patient pain.

Journal of Tropical Medicine, London.

March 15.

18 Cold Weather Mosquito Notes from India—Malaria in Umritsar and its Causes. (Continued.) G. M. Giles.
19 Yaws; its Introduction into Anguilla in 1902. I. Nurse Eat.
20 Elucidation of Sleeping Sickness. (Continued.) Louis Sambon.

Australasian Medical Gazette, Sydney.

February 20.

21 First Series of 100 Abdominal Sections for Pelvi-abdominal Disease. Fourness Barrington.
22 Infant Mortality and Infant Feeding. William S. Byrne.
23 Indicanuria. George H. Hanaia.
24 Value of Antistreptococcus Serum in Treatment of Severe Puerperal Septicemia. Richard Jones.
25 Lithotrity and the Bottini Operation at the One Sitting. H. C. Rinder.
26 Treatment of Hemoptysis. Francis Hare.
27 Some Curiosities of Terminology. F. Guy Griffiths.

Intercolonial Medical Journal of Australasia, Melbourne.

February 20.

28 Diagnosis of Perforated Gastric Ulcer. W. R. Boyd.
29 Surgical Treatment of Perforated Gastric Ulcer. W. Moore.
30 Pathology of Gastric Ulcer. Basil Killington.
31 Perforating Typhoid Ulcer, Treated by Laparotomy. A. V. L. Anderson.
31½ Diet in Typhoid Fever. R. Ken Herriage.

Bulletin de l'Académie de Médecine, Paris.

32 (LXVIII, No. 11.) Recherches sur la structure de la substance fibrillaire des cellules nerveuses. Marinesco. Abstract.
33 *Hygiène de l'enfance. Morel de Villiers.
34 *Fractures du radius dues au retour de la manivelle d'automobile. Ses variétés. Son traitement. Manière de la prévenir. Lucas-Championnière.

33. **Hygiene of Infancy.**—Pinard reviews the regulations decreed by the mayor of Villiers-le-Duc in regard to the hygiene of infancy. The mayor is a native of the small place and a physician, and his regulations are not all legally enacted, but are more in the nature of advice which his position renders authoritative. The mortality has been reduced to zero. Every child born in the community during the last ten years is alive and well to-day. The mortality had been 20 to 30.8 per cent. of the births during the previous decades for a century with the exception of a single decade, during which the present mayor's father—likewise a physician—had been the incumbent and devoted much attention to infantile hygiene. The regulations include one to the effect that every needy pregnant woman, married or not, must inform the mayor of her condition before the seventh month and state the name of the midwife whom she wishes to have attend her. The midwife is then sent by the mayor to examine the woman, to ascertain that there is no albuminuria, no fetal or maternal dystocia nor vicious presentation. She is paid $1 from the public funds for each visit. If the midwife finds anything abnormal the mayor is notified and he sends a physician selected by the pregnant woman, to take charge of the case. Every parturient assisted by the community receives 20 cents a day during ten days after the confinement if she remains in bed. This amount is paid to her at the end of the ten days. If she gets up before this limit she forfeits this sum. Other regulations specify points in regard to the feeding, fortnightly weighing of the infant, etc., and one promises a reward of 40 cents a month which is paid to every woman who has brought up a child to

the age of one year in good condition, breast or bottle fed. This sum is paid to her at that time, computed for every month during the year that the infant has been in her charge.

34. **Fractures of the Radius from Automobile Cranks.**—In starting an automobile the chauffeur pushes the crank until the motor starts to work, when he then lets go and the crank returns automatically to its place. But sometimes the gas lights prematurely and the small explosion drives the crank back unexpectedly. If the chauffeur has been cautious enough to take away his hand no harm is done, but if the returning crank pulls his hand or hits his wrist it is liable to do considerable injury. Walther has observed a case in which the wrist was literally torn out and months elapsed before the injury had healed. Lucas-Championnière has observed a number of instances of fracture of the radius from this cause. In 2 subjects the crank did not hit the wrist, but the hand, still holding the crank, was thrown backward with great violence. The mechanism of this fracture is the same as when we take the hand of a cadaver and break the bones by turning the hand abruptly backward. He describes the various forms of these fractures and their mechanism. In the above cases it was a "tearing out" while a "pushing in" causes more deformity. In these cases under discussion there is fracture but no deformity. There is no necessity for reduction; the parts can be easily held in place, without immobilization or vigorous compression. The parts heal finely and promptly under mobilization and massage applied from the first. In other cases the chauffeur has withdrawn his hand, but the crank hits his forearm and fractures the radius by direct impact. The left arm might be the injured one in this case, while the "tearing out" fracture can occur only in the right arm. The localization of the pain, crepitation, and impossibility of supination and pronation are characteristic for this fracture by impact. Sprains are frequent and in one case both bones in the leg were fractured as the subject was standing too near the crank. The fracture may occur likewise by impact of the crank on the "heel of the hand," and also by "tearing out" if the chauffeur attempts to restrain the movement of the flying crank. The swelling of the tendon sheaths and of the joint is the most prominent symptom, and no attempts at reduction should be made, while the dressings should be as simple as possible without fixation. The parts heal rapidly. The chauffeur may be able to steer the automobile after the accident, but this does not disprove the fracture, which may be readily established by radiography. He adds that automobilists may accept this form of fracture and regard it with as little concern as jockeys and bicyclists have learned to regard fracture of the clavicle, a professional injury which does not prevent their continuing in the race. Chauffeurs should be warned not to hold the crank too firmly, although the grasp of the crank may be involuntary in nervous persons and prevent the rapid withdrawal of the hand. Experienced chauffeurs state that the accident sometimes occurs from imprudence in regard to the management of the motor before starting the machine.

Semaine Médicale, Paris.

33 (XXIV, No. 11.) *Thyroid Grafts in Man. H. Cristiani (Geneva).—La greffe thyroïdienne chez l'homme.

35. **Grafts of Thyroid Tissue.**—Cristiani has long been experimenting along this line and published works on the subject in 1895. His research on animals showed that the graft must be homologous, the transplanted tissue must be normal and alive, the grafts very small and numerous, and transplanted into regions well supplied with blood. In this, his latest communication, he describes 3 clinical cases in which he tried thyroid grafting. The first subject was a young woman who required operation on the neck for a non-thyroid affection. Her thyroid gland was normal and scraps from it were implanted in her own back, between the clavicles, and in a myxedematous boy of 12. The boy's thyroid gland had been extirpated and he was grafted with thyroid tissue from the first case, from a woman of 34 affected with goiter, and also with scraps of his own thyroid gland. The woman of 34 was grafted with scraps of her own thyroid, which was but slightly altered, and with scraps from the thyroid of the boy. There were thus six different kinds of grafts: 1, normal thyroid tissue transplanted into a normal subject; 2, much altered thyroid tissue grafted on an apparently normal subject; 3, slightly altered tissue in a normal subject; 4, normal thyroid tissue in a distinctly pathologic organism; 5, manifestly altered thyroid tissue in a pathologic organism, and 6, slightly altered thyroid tissue in a decidedly pathologic organism. Portions of the transplanted scraps were excised from two to six months later. The findings demonstrated that it is possible to graft human subjects with thyroid tissue and thus obtain a permanent neothyroid organ, the same as is possible with animals. The results from the anatomic point of view are excellent when normal thyroid tissue is used. They are still positive when only slightly altered thyroid tissue is grafted, but a distinctly pathologic tissue undergoes degeneration. The technic which he has found most advantageous is to cut up the thyroid tissue into very thin slices with a sharp knife without crushing or impairing its vitality in any way. These scraps are then floated in physiologic salt solution and injected with a syringe through a trocar subcutaneously into the subject. He has found that thyroid tissue from the rat or rabbit thus prepared would keep for an hour without compromising its vitality, while it kept only ten seconds exposed dry to the air. He thinks that by this simple technic it is possible to graft a subject with thyroid tissue as a means of relieving disturbances due to the missing thyroid function, or as a preventive measure against cachexia strumipriva after extirpation of the thyroid gland. In spontaneous myxedematous hypothyroidia the grafts are liable to persist and develop if the tissue employed is not too much altered. His experiments further establish that when the subject is suffering from almost total suppression of the thyroid function the demands on the transplanted thyroid tissue are so excessive that the graft becomes degenerated from hyperfunction. On the other hand, when the subject already has a normally functioning thyroid gland the graft dies from disuse. The best results are attained when moderate functional demands are made on the graft, as in partially thyroidectomized animals. The grafts are much more successful and display remarkable vitality with a tendency to hypertrophy under these conditions.

Berliner klinische Wochenschrift.

36 (XLI, No. 11.) *Zur v. Behring'schen Schwindsuchtsentstehung (origin of phthisis). C. Spengler (Davos).
37 Tubes, Aortoaneurysma und Syphilis. H. Rupe. Statistical.
38 Minimum Requirements for Milk for Infants. C. S. Engel (Berlin).—Welches sind die geringsten Anforderungen die an eine Säuglingsmilch zu stellen sind?
39 *Zur Diagnose und Behandlung besonders der cardialen Form der Insomnie. L. Fellchenfeld.

36. **Origin of Tuberculosis.**—Spengler's protest against von Behring's views in regard to the origin of tuberculosis is based on numerous facts, among them his constant findings in cadavers of tuberculous children that the intestines are free from foci and bacilli, and that the primary localization is invariably in the bronchial glands. The bronchial glands were always found tuberculous in the cadavers of children who had succumbed to tuberculous meningitis. These facts speak for inhalation as the mode of infection. He believes that the predisposition to tuberculosis, the "phthisic habitus," is in reality merely the indication of an already existing, closed tuberculous focus somewhere in the body. The effect has been mistaken for the cause, as often happens, but an injection of tuberculin will clear up matters. Every human being, he thinks, who has reached the age of 30 has offered the tubercle bacillus one or more opportunities to settle and develop one or more local foci. A tuberculized subject, however, is far from being a phthisic. A certain proportion of the subjects thus infected become phthisic, others spontaneously recover and in the rest the affection remains localized and latent, although it may flare up later.

39. **Diagnosis and Treatment of Cardial Form of Sleeplessness.**—The heart may be regarded as the principal factor in that form of insomnia in which the subject goes to sleep naturally, but wakes up after an hour or two, suddenly, with a feeling of distress, usually palpitations and slight oppression in the chest. He tosses for hours in bed thereafter with no relief in sleep

until nearly morning, when he falls asleep again. Feilchenfeld ascribes this form of insomnia to a weakness of the heart muscle. The mild forms of muscular weakness are first revealed by this sleeplessness. The subject goes to sleep more readily when he lies on his left side, but wakes sooner. Examination of such persons has shown that after reclining long on the left side the apex beat is displaced to the left, almost into the axilla, and broadened, the pulse small and rapid, and symptoms of dyspnea are observed. The trouble is due to passive interference with the circulation as the subject reclines on his left side. This causes transient dilatation of the heart, and this in turn the symptoms experienced. The valves may be displaced also and this entails the symptoms of disturbed compensation, the restless sleep and premature awakening. He advances other theories to account for the symptoms observed, but all point clearly to the heart, and treatment should be directed to this organ. The subject is usually tired, predisposing to sleep, but lacking the full amount of fatigue necessary to induce sound sleep. He has 50 or 75 per cent. of the amount of fatigue needed, as it were, and treatment should aim to supply the missing 50 or 25 per cent. This is realized by incredibly small amounts of a narcotic. He has been very successful in this cardial form of insomnia with a combination of minute doses of digitalis and morphin: .015 gm., digit pulv. and morphin .0025 gm., given just before retiring. When the irritation proceeds from the intestines he finds it useful to administer sulfonal in .25 gm. doses two or three times during the afternoon. The smallest doses should always be tried first before resorting to larger ones, and sometimes they prove effectual when the larger doses fail.

Centralblatt f. Chirurgie, Leipzig.

40 (XXXI. No. 10.) *Ueber das freie seröse Exsudat des Peritoneum als Früh-Symptom einer Perforations-Peritonitis. C. S. Haegler (Basle).
41 Perforation of Stone-Containing Gall Bladder. Thiel.—Perforation der steinhaltigen Gallenblase in die freie Bauchhöhle. Operation. Heilung.
42 Steinhaltige Gallenblase als Bruchinhalt (gall bladder in hernia). Ibid.
43 (No. 11.) *Silver Wire Suture of Bones. H. Grisson (Hamburg).—Zur Technik der Knochennaht mit Silberdraht.
44 Die Behandlung der Frakturen am unteren Femur-Ende nach Bardenheuer. R. Graessner (Cologne).
45 Zur Technik der Paraffin-Injektionen. A. E. Stein (Wiesbaden).

40. Early Differentiation of Severer Cases of Appendicitis.—The Journal in abstract No. 90, page 686, mentioned Moszkowicz' announcement in regard to the value of a free serous exudate in the peritoneum as an early sign of the severer form of appendicitis, thus enabling the grave cases to be differentiated early, before serious symptoms have developed. Haegler here describes the results of experimental research which corroborate his statements. The serous effusion occurs in every case, but its quantity is proportional to the amount and the virulence of the germs or their toxins or of both. The peritoneum reacts to every irritation with a serous effusion proportionate to the intensity of the irritation. The large extent of effusing surface causes the accumulation of large amounts of fluid, but absorption keeps pace with it and compensates it under ordinary circumstances. In his experiments on animals he found that injection of cultures or toxins of the intestinal bacteria had the greatest irritative action, especially the anaërobic varieties, only equaled by that of the extremely virulent pus germs. This free serous or hemorrhagic effusion may be regarded as a protecting device against the toxins. If adhesions are not thrown up at once the contact of the toxins is followed by the effusion of a fluid to dilute and render them harmless. In local inflammatory affections of the intestinal wall, free effusion in the peritoneal cavity may, therefore, be ranked as an unfavorable sign. It shows that there is no tendency to wall off the irritating agents and that large amounts of very virulent toxins and possibly of the germs themselves, have irrupted into the open abdominal cavity or are continually finding their way into it.

43. Silver Wire Suture of Bones.—Grisson remarks that almost any method of suturing the bones with silver wire answers its purpose in case there is no suppuration. If there is suppuration it is sometimes necessary to remove the wire, and for this reason he recommends the technic which he illustrates, as with it the wire can be untied and withdrawn with ease. It is passed through the bone stumps as usual, forming a U. There is a knot in the right end, and this knot is drawn close against the bone. The left end is then brought to the right end as it emerges from the bone, and is passed around the right end, close to the bone, below the knot, after which its loose end is drawn down with forceps to form a loop underneath its horizontal portion. Both wires thus emerge through the wounds at the same point, and by pulling on the unknotted end it becomes untied and the wire can then be withdrawn by pulling on the knotted end. The technic is merely that of the ordinary sailor's knot with which rowboats are fastened.

Centralblatt f. Gynäkologie, Leipzig.

46 (XXVIII. No. 10.) *Patient's Consent. E. Chrobak.—Einwilligung der Kranken zu ärztlichen Eingriffen.
47 Rhinoplastik und vaginale Sectio cesarea. F. Ahlfeld.
48 Zur Aetiologie des Fistus vaginalis (Carruitas vulvæ). P. J. Tussay (St. Louis).
49 (No. 11.) *Manuelle Placenta-Lösung ohne Gummihandschuhe (without gloves). F. Ahlfeld.
50 Bilateral Implantation of Ureters in Bladder. Krönig (Jena).—Doppelseitige Ureterenimplantirung in die Blase.

46. Consent to Operations.—Chrobak comments on the lessening degree of confidence in the physician and the increasing tendency to hold him responsible for failures to cure. He thinks that the matter of self-protection of physicians and surgeons in this respect should be brought up for discussion at some general congress. He makes a practice of exacting from every patient a written consent to his intervention. The chart for each hospital patient contains a line to the effect: "I herewith declare my consent to the operation and every intervention which may be deemed necessary during it." This line is written or signed by the patient as a routine procedure, and as every one does it, those facing important operations are not terrified by any exception being made in their case. He has never had one refuse to sign. He always obtains the consent of the husband likewise whenever practicable, as he still shudders at remembrances of cases in which the husband lost his wife without any intimation that she was to be operated on or was in danger of any kind.

49. Manual Detachment of Placenta Without Gloves.—Ahlfeld mentions that manual detachment of the placenta has been done fifty-three times in his experience of 6,800 births to 1904. No gloves were used. Five of these 53 women died, 2 from hemorrhage and the others from pre-existing lesions. In not a single instance could the manual intervention be regarded as a factor in the mortality. As his mortality was thus zero, although gloves were not used, the similar lack of mortality in cases in which gloves were used can not be cited as an argument in favor of gloves.

Münchener medicinische Wochenschrift, Munich.

51 (LI. No. 11.) *Studien über Ausflockungserscheinungen (phenomena of flaky precipitation). M. Neisser and U. Friedemann.
52 *Ueber Agglutination von Typhus-Bacillen durch das Blutserum Hysterischer. Stolzenberg.
53 *Vorkommen von Typhus-Bacillen in den Fæces und dem Urin von Typhus-Rekonvalescenten. Herbert.
54 Bedeutung der intracellularen Glykogen-Reaktion der Leukocyten für die Lehre von der Misch-Infektion im Verlaufe der chronischen Lungen-Tuberkulose. O. Schröder.
55 *Origin of Tuberculosis. Cornet (Berlin).—Die Entstehung der Tub., mit bes. Berücksichtigung der v. Behring'schen Lehre.
56 Ueber Lymphangitis pulmonalis und deren Beziehung zur sogen. idiopathischen Empyema. W. A. Jurewitsch.
57 Strie patellares nach Typhus. G. Fischer.
58 *Zur Behandlung der Gonorrhoe des Auges (of the eye). G. Hirsch.

51. Phenomena of Precipitation.—This communication issues from the Frankfurt Institute of Experimental Therapy, in charge of Professor Ehrlich. A number of new facts in regard to flaky precipitation are reported, among them the confirmation of the assumption that capillary electric phenomena are concerned in the phenomena of precipitation. In precipitation by the agency of salts, that ion of the salt is the determining factor which bears the opposite electric charge to the charge borne by the particles in suspension. The rôle of the precipitating cation of the salt may be assumed by an electropositive colloid. The latter has likewise a precipitating action on elec-

tronegative suspensions or colloids. Colloids in themselves unable to induce precipitation, acquire this property on addition of a small amount of the salt—not enough in itself to induce precipitation.

52. **Agglutination by Blood of Jaundiced Subjects.**—Steinberg refers to agglutination of typhoid bacilli and states that the blood serum of persons with intense icterus had no agglutinating power in his tests. If agglutination occurs in case of icterus it can not be due to the presence of the bile in the blood, but to the same factor that is causing the icterus.

53. **Typhoid Bacilli in Feces and Urine of Convalescents.**—Herbert describes an epidemic of 98 cases of typhoid in a public institution; 59 of the subjects were taken sick within five days. Infection was clearly traced to 2 cases of typhoid in the institution in the last week of July. One of these patients infected a woman employed to wash the salads and potatoes for the table. During her period of incubation she must have infected these articles of food, as 2 cases developed August 23 and 24, and on the 31st the explosion occurred with 59 cases. By the end of October the epidemic had entirely ceased. A special laboratory was fitted up to determine the presence of typhoid bacilli in the urine and stools of the convalescents. They were found in the urine in 18 per cent. of the total of 98 cases, but only three times in the feces, and in these 3 cases they were also in the urine. The findings were positive only in the first four weeks of convalescence. The bacilli were found from eight to twenty-seven days after defervescence, the average duration being about fifteen days. During the second month of convalescence, therefore, all the patients were free from bacilli with a single exception. This was a patient who suffered from diarrhea constantly during convalescence. The severer the disease the longer the bacilli lingered in the urine. They were always numerous when found at all.

55. **Origin of Tuberculosis.**—[The views advanced by von Behring recently in regard to the origin of tuberculosis have raised a storm of protest on all sides and the medical press is teeming with communications from investigators who have been raking over their material and statistics for data to refute his assertions.] Cornet cites the Prussian official statistics to show the constant progression of the number of cases from the third year upward to the maximum between 60 and 70. He adds that he has personally experimented on between 3,000 and 4,000 animals to determine the mode of infection with tubercle bacilli and allied points. In every instance the portal of entry itself shows signs of the infection or, in any event, the nearest adjacent glands. The exact mode of entrance of the infection can be determined for every individual case from the pathologic anatomic findings except when the general organism is completely involved. The statistics further show that tuberculosis is constantly decreasing in Prussia. The number of lives thus saved amounts to 370,000 since 1889, estimating the deaths that would have occurred if the previous average death rate from tuberculosis had been maintained.

58. **Treatment of Gonorrhea of the Eye.**—Hirsch reports the prompt cure of a threatening case of gonorrheal inflammation of one eye from autoinfection. He commends the technic followed as promising surpassing results for such cases. He made a single subconjunctival injection of a 1/500 solution of hydrargyrum oxycyanate to which a little acoin had been added. There was considerable irritative reaction, but the progress of the process was arrested and three days later the cure was completed by a repetition of the injection.

Correspondenz-Blatt f. Schweizer Aerzte, Basle.

Last indexed page 127.

59 (XXXIII, No. 24.) *Rationelle Psychotherapie. Dubois.
60 *Retention der Chloride und das salzige Sputum bei Pneumonie. W. Spirig.
61 (XXXIV, Nos. 1-2.) *Zur Früh-Diagnose und Früh-Kur der Lungen-Tuberkulose. C. Fischer.
62 *Sudden Death in Children. E. Feer (Basle).—Ueber plötzliche Todesfälle im Kindesalter, insb. über den "Ekzemtod."
63 (No. 3.) Vaginale oder abdominale Total-Exstirpation bei Uterus-Carcinoma. O. von Herff. (Commenced in No. 2.)
64 Kasuistischer Beitrag zur Cholegen-Behandlung. P. Praehler. Results negative.
65 (No. 4.) Nourishment of Lens and Origin of Cataract. J. Pfister (Lucerne).—Die gegenwärtigen Kenntnisse der Linsenernährung und der Katarakt-Entstehung.
66 Deutung der Eigenschaften und Wirkungsweisen der Immunkörpern (Immune bodies). H. Zangger. (Commenced in No. 3.)
67 (No. 5.) Ueber akute Leukämie. A. Oswald.
68 *Medical Prescribing of Alcohol. A. Fick. From society report.
69 (No. 6.) Important Injuries of Knee. C. Schüler, Schlatter and others.—Die obere Tibia-Epiphyse im Schatten der Röntgenstrahlen.
70 Zum gegenwärtigen Stand der Myopie-Operation. E. Wolffin.
71 Successful Abortion of Furuncles with Superheated Air. N. Reich. Abstract.
72 *Nursing Bottle to Arrest Coughing. Rahn. Abstract.

59. **Principles of Psychotherapy.**—Dubois ascribes to "ankylosis of the brain" the failure of the majority of physicians now growing old in harness to profit by the aids afforded by psychotherapy. He urges on the younger generation the better exploitation of these measures, and protests against the assumption that they belong exclusively to the neurologists and psychiatrists. Psychoneuroses require psychotherapy, and to pay attention to any organ or system merely adds an imaginary organic cause and aggravates the condition. Abnormal physical conditions may exist, but it is better to disregard them until the psychic condition is restored to normal as the mental predisposition is the disease and the others are merely the inciting agent, which may safely be neglected until the psyche is working normally. They will then usually right themselves or will yield readily to treatment. He insists on the necessity of informing the patient that it is the psyche which is diseased and requires treatment. The entire structure of autosuggestion collapses like a card house when the psychoneurosis is cured. He mentions the case of a woman of 40 who had suffered from complete astasia-abasia for ten years with hysteric contractures, etc., dating from the birth of a child. Total hysterectomy had been done to relieve her, without effect; she had taken a number of Weir Mitchell courses, and had strychnin injections for a year, with electricity and massage treatment, but not a trace of improvement. When Dubois saw her she had long been bedridden, with nervous asthenopia, photophobia and constant chilliness. In his half-hour talk with her he succeeded in convincing her that there was no organic reason for her condition and, that if she once made up her mind to get up and live like other people she could. In less than a week she was up and about and has been in perfect health since he impressed on her that all she had to do was to transform her idea that she was unable to do certain acts into the idea that she could do them, first clearly setting forth the arguments against the possibility that there was organic disease in the parts affected. Another patient had been treated during eleven years for neuralgia in the pelvis. The pains occurred at every attempt to walk and she had been compelled to live at home like an invalid. She was 35, the wife of a physician, and in blooming health. No indications of nervousness or hysteria could be found except a tendency to be depressed in the morning. He, therefore, explained to her that pain, like other sensations, is at bottom a mental impression. It may be the result of an idea as well as of a physical lesion. He saw her every day and constantly reiterated the necessity of controlling her psychic impressions and thus educate herself out of the idea of pain. Seven weeks of this exclusively psychic treatment—like water dropping on a stone—finally conquered, and there has been no recurrence of the pains during the several months since. In treating such patients the family must be drawn into the conspiracy to preach the necessity for a healthy stoicism and courageous bearing in all things, small and great. The physician to be successful in psychotherapy must be an optimist. The depressing views of the Schopenhauer or Nietzsche school of pessimists must be discarded if one would succeed in curing psychoneuroses. Paralyzing neurasthenia lurks in all the works of these and similar writers. The peace of mind which protects the health of body and psyche rests on a philosophy of life which, notwithstanding the difference in its origins, is common to both the Christian and the free-thinker. What we need is a healthy optimism which shows us life as it is and enables us to be brave and instill courage.

60. Retention of Chlorids and Salty Sputa in Pneumonia.—Spirig recently encountered a pneumonia patient who complained that his sputa tasted salty. He was tested with other substances and detected a salty taste in them or not, in harmony with the findings by other persons. The subjective salty taste was, therefore, an objective reality. Spirig suggests that this salty taste of the sputum might be utilized as a means of detecting retention of chlorids in the system in pneumonia and other diseases.

61. Early Diagnosis of Tuberculosis.—Fischer writes from the Beauregard Sanatorium to impress on the profession the necessity of warning the public that the ravages of tuberculosis might be materially reduced if physicians were consulted earlier. Any cough that lasts for more than four to six weeks and is accompanied by general depression, loss of weight, etc., should be regarded as a grave sign and medical aid should be sought without further delay. He mentions the tenacity and persevering endurance of the Swiss character as a hindrance to this prophylactic measure, relating instances of men keeping doggedly at work for months without consulting any physician, while being rapidly undermined by a pulmonary affection which might have been cured if appropriate measures had been adopted in the beginning.

62. "Eczema Death."—Feer's comprehensive study of sudden death in children, especially those under treatment for eczema of the scalp, unmistakably establishes a certain connection between the sudden fatality and the eczema. He reports 8 such instances that have occurred at the Basle Children's Hospital, and summarizes 22 similar ones found in the literature. Von Ranke has seen 16 cases of sudden death in the last ten years preceding 1902. There was no hyperplasia of the thymus in 5 (bronchitis in 3, anemia in 1 and eczema with sudden bronchopneumonia in 2). In 4 other children the thymus was enlarged and there were serious lesions elsewhere. In 7 the thymus was enlarged, but there were no other appreciable complications except eczema in 6. He is convinced that there is a close connection between the sudden death and the eczema, which Feer corroborates. In the total 30 cases of sudden death on record, aside from the lymphatic apparatus, there was nothing to explain the fatality. In the 13 cases with careful necropsy pronounced status lymphaticus was noted in more than three-fourths, as also in a number of the others. For these and other reasons which he enumerates Feer is inclined to regard infantile eczema as a manifestation of a dyscrasia, study of which would elucidate the problem of the status lymphaticus. The sudden death of eczema babies usually occurred while the scalp affection was being treated. Sometimes it was preceded by high fever, suggesting that the removal of the crusts or the therapeutic applications were responsible without the intervention of a drug intoxication. The old dread of "driving in" the eczema was at first ridiculed by the present generation of physicians, but their experience has compelled them to modify their views. Pleurisy, bronchopneumonia or diarrhea have too often followed the cure of eczema of the scalp for the occurrence to be regarded as a mere coincidence. With the spontaneous return of the eruption the other affections improved. Feer has had no personal experience with this "metastasis of eczema," as he calls it, but thinks that it is reasonable to assume its existence, and that the sudden eczema deaths are due to metastasis in some vital organ, or at least to the diversion of the exudate with its absorbed or not eliminated toxic substances. In some of the cases on record beginning bronchitis and foci in the lungs were found after the sudden death in apparent health. He adds that most cases of asthmatic bronchitis in children affect those who were milk-crust babies. Adenoid vegetations and enlarged glands are also common in such children. The dyspnea and cyanosis at the onset of a severe attack of bronchial asthma resemble very much the condition that ushers in the sudden death in the status lymphaticus. Any one who has witnessed an "eczema death" is henceforth very cautious in treating a scalp affection. He proceeds very gradually and uses the mildest local treatment, directing his efforts to improve the general condition. Jadassohn stated in the discussion which followed the reading of Feer's paper, that he had never seen a case of "eczema death," and that he always strove to heal the eczema as promptly as possible, believing that it opened an entrance for infection. Demme found tubercle bacilli under the crusts in one instance. Hagenbach related a number of cases of sudden death in children, but the status lymphaticus does not explain them all.

68. Medical Prescribing of Alcohol.—Fick argues that all the effects observed from alcohol are in the nature of a paralyzing of the brain cells. The use of alcohol can therefore be depended on when a narcotic action is desired as a sedative, to promote the appetite and against the night sweats of phthisis. He admits the efficacy of alcohol in these directions, but doubts the advisability of prescribing it, as the same results can be attained by other means. It should be restricted to acute affections and to incurable cases, the latter including the aged. The idea that alcohol "strengthens" is erroneous and should be combated. There is no doubt that medical prescriptions are responsible for a certain, if small, share of the prevalent alcoholism. Naegeli thinks that the paralysis of the vasomotors which follows the use of alcohol is a direct contraindication to employing it in acute infectious diseases, as one of the greatest dangers in this condition is the already existent vasomotor paralysis, which is only aggravated by the alcohol. The statistics of the London Temperance Hospital do not show that the death rate is any higher in the absence of alcohol, but rather the reverse. Fick never gives alcohol to any patient before or after an operation, and when possible he insists on its non-use during the few weeks beforehand. In summing up his views on alcohol he cited the famous report of the commission appointed by the English government to study the subject of opium in India. Certain prominent physicians and government officials testified in favor of opium as a stimulant, euphoricum and benefit to society!

72. Nursing Bottle to Arrest Coughing.—The sipping of fluid will frequently arrest coughing, and Rahn recommends the use of an ordinary nursing bottle to hold the fluid when it is needed by a reclining subject. The action of sucking the nipple tends to inhibit the coughing reflex. Water, mineral water or any decoction may be used in the bottle to sip in small amounts at any time, night or day, without the necessity for rising or fear of spilling any of the fluid.

Brasil-Medico, Rio de Janeiro.

Last indexed XLI, page 330.

73 (XVII, No. 40.) °Valor do dente de Hutchinson na heredo syphilis. Moncorvo Filho.

74 °Prophylaxia da febbre amarella (yellow fever). E. Ribas. (Concluded.)

75 Injecções endovenosas de collargol. D. de Almeida. From society report.

76 (No. 41.) A voltalisação cutanea no tratamento dos aneurismas. A. Britto (Bahia).

77 (No. 43.) A spirillose das gallinhas (poultry disease). E. Marchoux and A. Salimbeni.

78 (No. 47.) °Prophylaxia da febbre amarella. P. Pereira (Bahia). (Concluded.)

79 (No. 48.) A febbre amarella. Marcoux, Salimbeni and Simond. Report of French Commission. See page 983.

80 (XVIII, No. 1.) °Cold Packs in Broncho-pneumonia in Children. J. Pinto.—O envolvimento frio do thorax no tratamento das broncho-pneumonias infantiles.

81 As ideas de Behring sobre o contagio e a prophylaxia da tuberculose. A. Peixoto.

82 (No. 2.) °A proposito da variola nas creanças. F. Figueira.

83 °Caso notavel de fecundidade. O. Machado. From society report.

84 (No. 4.) °Da serum therapia no envenenamento ophidico. Vital Brasil.

85 Notas sobre hypohemia intertropical. F. Moraes.

86 Estudo da uncinariose. M. de Menezes.

87 (Nos. 6-7.) °Novo signal de diagnose precoce da tuberculose pulmonar. A. Simoes.

88 (No. 8.) °O methodo brazileiro ou voltalisação positiva no tratamento dos aneurismas da aorta. A. de Freitas.

73. Hutchinson's Teeth in Inherited Syphilis.—Moncorvo observed typical malformation of the upper and lower incisors in 6 out of 8 cases, while in 2 the lesion was limited to atrophy of the upper incisors. In one of the cases there was also a notch in a lower canine tooth.

74. Prophylaxis of Yellow Fever.—Ribas concludes this detailed analysis of his experiences as director of the public health service at San Paulo with the statement that no epidemic ever occurred where the stegomyia was not prevalent. He also mentions that the meteorological conditions affect the

development of an epidemic, not only by favoring the proliferation of the mosquitoes, but also the proliferation of the pathogenic micro-organism inside it.

78. **Prophylaxis of Yellow Fever.**—Pereira is professor of general medicine at Bahia, and argues to prove that yellow fever is an exotic infection in Brazil, and also that it may be transmitted by insects other than the stegomyia. Consequently, measures against the latter should be supplemented by disinfection of the dwelling and of contaminated objects. He urges compulsory disinfection of incoming ships with the Clayton apparatus as a means of preventing the importation of all kinds of pestilential and exotic affections as well as of yellow fever.

80. **Cold Compresses to the Thorax in Bronchopneumonia in Children.**—Pinto is an advocate of frequently renewed, cold, wet compresses applied to the thorax in this affection. The respiration becomes deeper and slower from the moment the cold is applied. They induce an extensive and salutary revulsion over the skin of the thorax, reducing the fever, regulating the pulse, soothing the nervous symptoms, agitation, insomnia, etc., and clearing out the organism by the extensive diuresis induced. He refrains from medication as a rule.

82. **Diazo Reaction in Smallpox in Children.**—Figueira found the diazo reaction positive in 24 children with smallpox, the ages ranging from 34 days to 2½ years. It was found from the second day into convalescence, in both mild and severe forms, simple or complicated, with or without fever, and under various methods of treatment. Another child whose varicella was mistaken for smallpox was sent to the smallpox hospital and the absence of the diazo reaction was one of the points that cleared up the diagnosis. In measles he found the diazo contradictory, distinct in 2, but negative in 5. It was also absent in mumps.

83. **Remarkable Fecundity.**—Machado reports the case of a woman of 38, married seventeen years, who has had twenty-four children in eighteen pregnancies. The ninth delivery was an induced abortion about the fifth month, and five fetuses were expelled. This was followed by seven other abortions induced about the fourth or fifth month. The last delivery resulted in the birth of healthy twins. She is a tall woman, the thyroid gland slightly enlarged, the face somewhat asymmetrical, the glance restless, the pupils dilated. As a child she suffered from hysteria and later from ozena. Her husband died at 50. She is the only survivor of five children. Her mother was an epileptic.

84. **Serum Treatment of Snake Bite.**—The main points of Brazil's communication were mentioned in a report of the Brazilian Medical Congress in 1903. (See page 504 of Vol. XLI.)

87. **Early Sign of Pulmonary Tuberculosis.**—Simoes has encountered invariably in tuberculous subjects and never in others, a cutaneous reflex, which he describes as a rapid elevation of the skin—a lump forming when the thorax is percussed. The phenomenon is the more pronounced the farther advanced the disease, but is unmistakable at all stages. As a rule, he has found the right side most frequently affected in tuberculous men and the left in women. The sign is due, he thinks, to the extra irritability of the peripheral innervation of the thorax in these subjects, causing sudden contracture of the muscular fibers at the point percussed, the contracture lasting several seconds, and forcing the derma above them to bulge out. Sometimes the bulging is accompanied by a slight fibrillary wave running through the subjacent muscle. It differs from other reflexes noted by Ziemssen and others in that the wave runs across instead of lengthwise of the muscle fibers. He percusses with a cylindrical instrument of wood, aluminium or other metal, about 12 cm. long by 6 mm. in diameter, one end rounded and the other tapering, using the rounded end to percuss very sensitive subjects and the tapering end for others. The front or the back of the thorax is tapped with this instrument, or even a common lapis stick. The reflex can be elicited almost anywhere over the thorax in advanced cases, but in the incipient stages it is most pronounced in the infraclavicular fossa below the clavicle.

88. **Electric Treatment of Aneurism.**—The method of treating aneurism of the thoracic aorta by local application of the galvanic current has been extensively exploited by the medical profession in Brazil, and all concur in extolling its superior efficacy. The physicians there proudly claim it as the "Brazilian" method, and it has now a long record of successes in their hands during the last two decades. Modesto Guimaraes was able to demonstrate with an artificial or phantom aneurism, made with blood vessels from the cadaver, that the application of the electricity actually did aid in the formation of a clot and obliteration of the sac, under conditions approximating the natural. The anode is impregnated with a 20 per cent. solution of potassium iodid, or, in the case of syphilitics, with mercuric iodid, to take advantage of the phenomena of cataphoresis. Absolute repose and a milk diet are enforced whenever practicable as important aids in the treatment, but the main point is the application of the galvanic current with large electrodes, the anode fully 8/11 or 11/16 cm., while the negative electrode measures 16/24. The positive pole is applied directly over the aneurism, the negative pole to the back, directly opposite the anode. The current is gradually increased to 30 milliamperes and applied for twenty minutes, after which it is gradually turned off again. The minimum is 20 milliamperes and ten minutes' application, the maximum 80 milliamperes and 30 minutes. The pain subsides almost at once. Nature is aided in the process of repair and improvement is evident in eight days to two months of these daily applications, lengthening the intervals to two days after the pains and the other symptoms have subsided. When a cure is impossible 20 to 60 applications are applied as a palliative measure, and are always beneficial. A complete cure requires about 120 to 150. The subsidence of the tumor can be followed with the eye or by radioscopy. Freitas does not make the applications as long as Britto, preferring 15 to 20 milliamperes for fifteen or twenty minutes only. He describes 6 cases in detail, with the photograph of one patient. As a typical example we cite the case of a woman who had suffered for years from a dilatation of the aorta, in extreme anemia from multiple causes, with dyspnea at the slightest effort and exaggerated pulsation throughout the entire arterial system. She received 130 applications of the galvanic current as described, and during the three years since has been completely free from her previous disturbances. She has spent a season at an altitude of more than 3,000 feet, has passed through an exceptionally severe attack of la grippe, but her heart and vascular system have persisted in fine condition without sign of recurrence of her old troubles, while the local condition of the dilated artery is excellent. These facts demonstrate that she has been absolutely cured. (See also No. 76 above.)

Books Received.

Acknowledgment of all books received will be made in this column, and this will be deemed by us a full equivalent to those sending them. A selection from these volumes will be made for review, as dictated by their merits, or in the interests of our readers.

THE COMMONER DISEASES OF THE EYE. How to Detect and How to Treat Them. For Students of Medicine. With 250 Illustrations, Many of Them Original, of Which 7 are Colored Plates. By Casey A. Wood, C.M., M.D., D.C.L., Professor of Clinical Ophthalmology in the University of Illinois, and Thomas A. Woodruff, M.D., C.M., L.R.C.P. Lond., Professor of Ophthalmology in the Post Graduate Medical School, Chicago. Cloth. Pp. 400. Price, $1.75. Chicago: G. P. Engelhard & Co. 1904.

TREATISE ON DISEASES OF THE SKIN, For the Use of Advanced Students and Practitioners. By Henry W. Stelwagon, M.D., Ph.D., Clinical Professor of Dermatology in the Jefferson Medical College. Third Edition. With 230 Illustrations in the Text, and 20 Full-page Lithographic and Half-tone Plates. Cloth. Pp. 1,115. Price, $6.00. Philadelphia, New York and London: W. B. Saunders & Co. 1904.

TWENTY-EIGHT ANNUAL REPORT OF THE MANAGERS AND OFFICERS OF THE NEW JERSEY STATE HOSPITAL at Morris Plains. For the Year Ending Oct. 31, 1903. Paper. Pp. 122. Camden, N. J.: Sinnickson Chew & Sons Co. 1904.

TRANSACTIONS OF THE VERMONT STATE MEDICAL SOCIETY for the Year 1903. Annual Meeting for 1904, at Rutland, October 13 and 14. Cloth. Pp. 296. Burlington: Free Press Association. 1903.

NINTH BIENNIAL REPORT OF NORTH CAROLINA BOARD OF HEALTH, 1901-1902. Paper. Pp. 148. Raleigh: E. M. Uzzell & Co. 1902.